MARCH 18, 1974

Commerce Today

Harvesting The Sun

Page 4

Protecting The Citizen's Privacy

This column was written by Under Secretary of Commerce John K. Tabor.

Recognition of the responsibility to protect the citizen, both natural and corporate, is what lies behind President Nixon's new initiatives in the field of information collection and use.

The President recently pointed out that new computer technology developed in recent years has vastly increased the ability of all organizations, both public and private, to gather, store and retrieve information on millions of individuals and firms. While this ability is essential for the operation of modern industrial society, it also can do serious damage to both individuals and firms unless adequate safeguards against unauthorized disclosure are provided.

To meet this new challenge, the President has created the Domestic Council Committee on the Right of Privacy, chaired by Vice President Ford and including among its members Secretary of Commerce Dent. The Committee will conduct a broad review of government and industry practices in data gathering and will recommend specific measures which can be taken to ensure further protection of the right of privacy.

The Commerce Department will be a major source of assistance to the Committee. As a result of its two years of work on the issue of privacy, Commerce believes there are three distinct aspects of the privacy problem:

► **Privacy** is a right and property of individuals. It is established by judicial or legislative process, aided by the executive.

► **Confidentiality** is a property or condition of data or information. The degree of confidentiality of data about persons is determined by the scope of the right of privacy.

► **Security** is the protection of the computer system; i.e., its hardware, software and data, from misuse through the imposition of appropriate safeguards.

The Department is currently at work on various projects that will advance the work of the Privacy Committee. For instance, the Department is now in the process of determining exactly how the Federal Government collects information on people and how that information is protected. The Department also has under way projects dealing with information management and automated systems; quality control and computer software; standardization of computer management systems; and access procedures to computer systems. These procedures, being developed by the Department's National Bureau of Standards, are expected to assist citizens in their ability to inspect and correct information held by public and private organizations. These projects have already been of use to the Federal Trade Commission in their handling of the problem of citizens' access to credit records as guaranteed under the Fair Credit Reporting Act of 1970.

Finally, the Department has been working with other federal agencies and with private sector members to develop standards, procedures and guidelines to achieve needed safeguards for data confidentiality and computer security; identification and authorization of users of computer systems who gain access to the system from remote terminals; and for the protection of data in transmission between computers and customers terminals and in storage in customers terminals.

As the President said: "Advanced technology has created new opportunities for America as a nation, but it has also created the possibility for new abuses of the individual American citizen. Adequate safeguards must always stand watch so that man remains the master—and never becomes the victim—of the computer."

The Department of Commerce is keenly interested in contributing to the solution of this problem and stands ready to assist the Vice President's Committee in every way.

John K. Tabor

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COVER: *Large "solar farms" envisioned in this artist's concept could be located in vast unused desert areas to gather solar energy for conversion to thermal power and electricity to improve the energy picture. Shade from the collectors could allow the desert to bloom with grass and flowers. Scientists from the University of Minnesota and Honeywell Inc. will build a working model solar collector as part of a National Science Foundation grant. Story concerning other efforts in this area begins on Page 4.*

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Sales, Prices, Production, Investment Give Conflicting Signals On Outlook For Business

Economic Highlights is prepared by Dr. Sidney L. Jones, Assistant Secretary of Commerce for Economic Affairs.

An assessment of recent economic reports does not provide conclusive evidence on how the U.S. economy is likely to perform during the remainder of 1974. It offers interesting clues, however, on the immediate responses of consumers and businessmen to the sudden scarcity of oil.

The lack of a clear pattern in the various economic data should not be surprising. The Arab oil embargo buffeted the economy during a sensitive period of transition from the exceptionally high growth rate of 1972 and early 1973 to a more moderate pace of expansion. Thus, concern about the impact of the oil shortage was superimposed on the more familiar uncertainty about the future rate of economic growth and the problem of persistent inflation.

While these uncertainties are far from being resolved, it is clear that the economy was not shocked into a state of paralysis. Business plans for investment in new plant and equipment appeared nearly as strong in January as in November. The declines in auto sales and industrial production and slower growth in employment are certainly serious, but they are clearly not the whole story.

Leading indicators

The recent faltering of the Composite Index of Leading Indicators was typical of the irregular performance of many economic series. The index is a statistical summary of forward-looking indicators which typically change direction before the larger body of economic statistics. In the four quarters of 1973 it advanced 5.0, 2.1, 2.2, and 0.4 percent. The small fourth-quarter change resulted from a 2.7 percent decline in December, one of the sharpest drops on record. However, the January index recovered much of the lost ground with an advance of 2.0 percent. Price rises accounted for a substantial part of the January rise, but there were also gains in indicators that relate to output more than price changes, such as building permits for new housing and new factory orders for durable goods.

The plunge in automobile sales was indirectly responsible for a major share of the December decline in the index. Consumer installment debt registered only a small gain—quite different from its usual large expansion—and this was mainly attributable to the decline in auto sales. Consumer installment debt was stronger in January, primarily because of gains in non-auto consumer durables.

Difficulties arise in trying to determine whether the index is accurately signalling a turn in the economy. One problem includes the frequent revision of the index subsequent to the announcement of the preliminary estimate as additional indicators become available. Also, one cannot be certain how the index responds to unusual developments such as the Arab oil embargo, a high rate of inflation, or price controls. For these reasons it is recommended that the index be considered along with other developments in trying to forecast business conditions.

Oil and food prices

Inflation is as worrisome as the physical shortage of energy resources. Food continues to be a major factor in the recent advances of both retail and wholesale prices. At the same time, petroleum and related products have on occasion accounted for more than half the rise in the Wholesale Price Index.

The WPI rose 1.2 percent in February, a high rate but still much improved over the 3.1 percent jump the previous month. The Consumer Price Index advanced 1.0 percent in January following a 0.5 percent rise in December. The recent increases in the WPI are likely to cause further upward pressure on retail prices in the months ahead. Furthermore, the tightness in fuel supplies probably will raise costs further throughout the economy. Even if fuel prices level off, they may continue to push up other prices since energy costs affect almost all goods and services to some extent in the production, transportation, and marketing stages.

Capital spending strength

Business investment in capital spending, frequently a volatile element in the economy, is expected to continue a strong rate of expansion into 1974. The latest figures indicate new plant and equipment outlays will increase 13.0 percent to $112.7 billion in 1974 compared to the 12.8 percent rise last year. Recent developments caused some shifts among industries, according to a survey taken in January, and the gain in the fourth quarter of 1973 was smaller than previously anticipated, but the projection for 1974 is slightly higher than the previous reading.

Over the past several months, energy problems may have influenced spending plans for the first quarter of 1974. For example, outlays in mining jumped from 1.8 to 12.3 percent, and utilities investment rose from 1.7 to 6.1 percent. Railroads scaled down their projected increase from 22.7 to 10.2 percent and airlines reported that their capital outlays would be 7.7 percent below last year instead of the previously planned 2.7 percent decline.

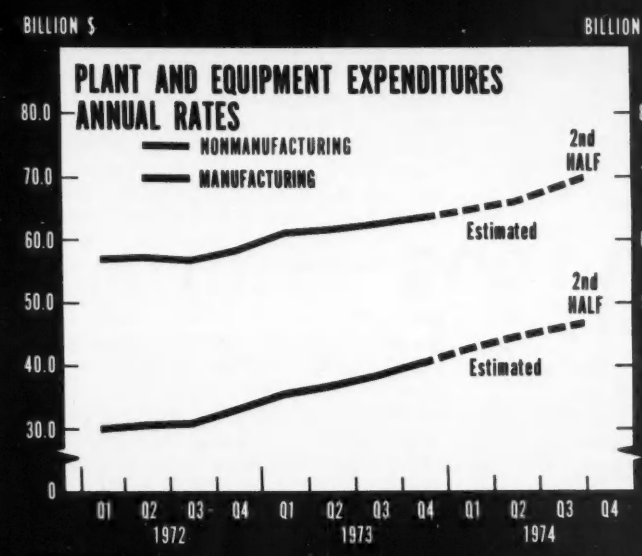
Production and employment

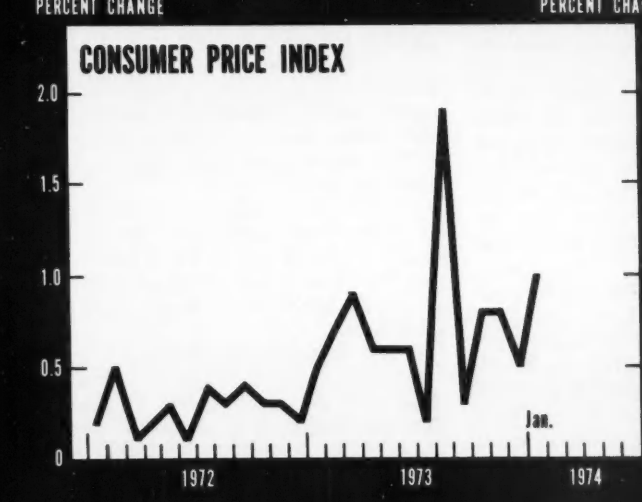
After declines of 0.6 percent in December and 0.8 percent in January, the index of Industrial Production was only about 3 percent above a year earlier. The January decline, the largest since 1971, reflected the large drop in auto production and generally small declines in all other sectors.

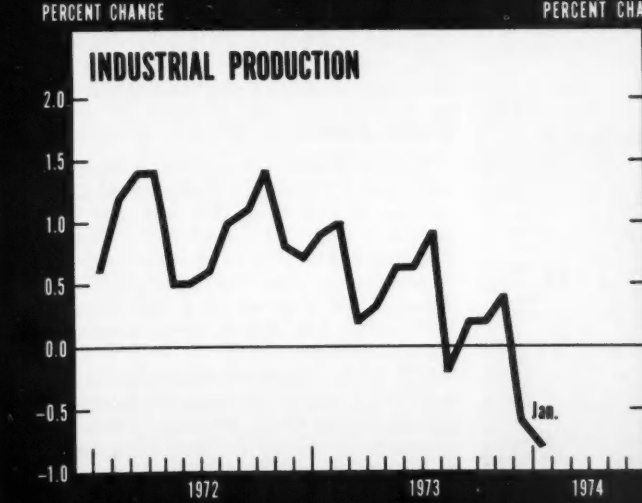
The unemployment rate remained unchanged from January to February at 5.2 percent after climbing about half a percentage point in the previous three months. Payroll employment increased 175,000 for the month, and regained the previous high reached in November.

Summary

The total economy continues to be characterized by diversity and change. Obvious weakness is evident in some sectors of the economy—particularly residential construction and automobiles—but there are some preliminary signs that housing activity may well be stabilizing prior to turning upward again and even the automobile sector seems to be making progress toward reducing bothersome inventories and adjusting the product mix. Many industries continue to experience heavy demand for new production and these pressures, combined with the capital investment plans, indicate that the economy still has good prospects for improving economic activity as we move through 1974.







All data seasonally adjusted

Commerce Today
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March 18, 1974

Sun Could Brighten Long-Term Energy Picture For U.S. Economy

What energy crisis? There's plenty of energy available, and we know how to use it. But paying for it is another matter, and therein hangs a tale.

The sun is a source of almost unlimited energy, most of which is now wasted. About 30 percent of the energy from the sun striking the earth's atmosphere is immediately bounced back into space as shortwave radiation. Another 47 percent is absorbed by the atmosphere, the land and the oceans, giving us our daily temperature; twenty-three percent is used in evaporation, convection and precipitation processes. A small fraction of one percent powers the movement of air and ocean currents. An even smaller amount, about 40 billion kilowatts, is converted into plant energy in the cholorphyll of green leaves. It is this tiny fraction which has produced all the fossil fuels on earth.

- In forty days we receive enough solar energy to last a century, if properly used.
- Total solar energy reaching the ground in the continental 48 states each day averages about 600 times the country's daily energy consumption.
- Solar energy striking the roof of an average house is from two to ten times the amount needed to heat and cool the house.

In recent history a new source of energy has been developed every several decades. In 1870 coal began to displace wood, water power and wind power. Some forty five years later gas entered the fuel picture. Oil was discovered in 1859 and became an important item of commerce in the 1920s. Hydroelectric power was introduced in 1890 following development of the generator. The most recent entry was nuclear energy, where the first such power plant was completed in 1957 and whose full potential has not yet been developed.

Some scientists feel that a future major source could be solar energy.

And yet, the use of solar energy is really not new. Over 60 years ago, a 50-h.p. engine was successfully powered by solar steam along the banks of the Nile River. In this country, a California firm made solar water heaters from around the turn of the century until competition from cheaper natural gas forced them to drop production in the mid-1930s. Solar water heaters are common today in Israel, are standard equipment in many homes in Northern Australia, and have been bought by more than a million Japanese for their homes.

In short, the technology is here; what is needed is a major effort to develop economic applications that are competitive with currently available energy prices.

Three broad applications of solar energy have been identied:

- ► The heating and cooling of residential and commercial buildings (research has tended to concentrate in this area).
- ► The chemical and biological conversion of organic materials to liquid, solid and gaseous fuels.
- ► The generation of electricity.

A panel of experts, formed at President Nixon's request, reported that by the year 2020 solar energy could provide at least 35 percent of the heating and cooling for buildings in the United States, more than 30 percent of the methane and hydrogen needed for gaseous fuels, and greater than 20 percent of the country's electric power needs. The panel stresses that all this could be done with minimal effect on the environment and at a substantial savings of fossil fuels.

YESTERDAY—*Use of solar energy is not a new concept. This 1913 photograph shows part of a solar power plant along the banks of Nile.*

Funding jumps

National Science Foundation funding for solar energy research averaged about $100,000 per year between 1950 and 1970, then turned sharply upward to $1.2 million in fiscal 1971, $1.6 million in fiscal 1972 and $4.0 million in fiscal 1973. Spending for the current fiscal year will total approximately $12 million, with support for 51 projects at nonfederal institutions.

The Atomic Energy Commission has alloted solar energy research two percent of the $10 billion which President Nixon has proposed for energy research development in the fiscal years 1975-79. These spending levels are well below those recommended by the Solar Energy Panel.

Solar energy becomes much more competitive once you throw in the rising prices of fossil fuels and their health and safety impact on the environment. The costs of distributing the fuels are also eliminated.

Economic studies have shown that solar heating already is less expensive than electric heating in a wide variety of U.S. climates, and in a few locations it is competitive with gas or oil heat. These same studies demonstrate that solar heating, even without supplemental savings from cooling, can be a practical alternative to conventional heating. The Solar Energy Panel concluded that residential heating and cooling could be in widespread public use within a decade.

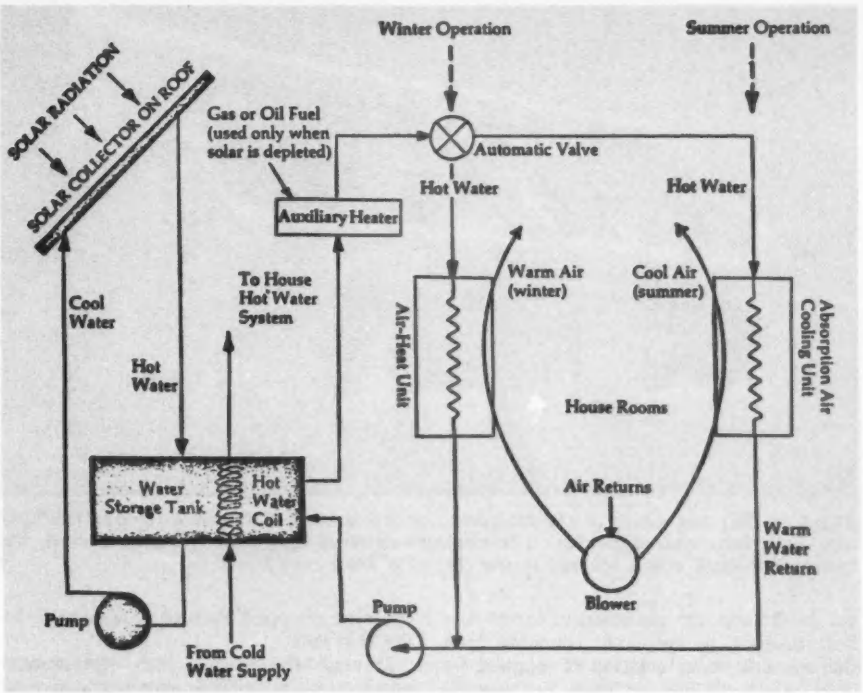
Approximately 20 experimental solar heated homes have been designed, built and operated in the U.S. Various combinations of collector types, heat storage techniques, heat transfer media, and auxiliary energy supplies have been used. Workable heating systems have evolved; however, they are not fully engineered, either from the standpoint of selecting the best systems or optimizing the design of those systems. In addition, solar-powered air conditioning systems, which have been operated in several laboratories, must be designed into and combined with the solar heating system.

How it's done

Solar energy is trapped by a rooftop collector facing the sun at an elevation 15 degrees greater than the latitude. Collectors fall into two categories, flat plate and focused. Flat plate collectors are usually preferable since they can utilize diffuse solar radiation and, consequently, perform effectively on cloudy and overcast days. They can also be maintained in a fixed position. While focused collectors can generate much higher operating temperatures and thus are capable of higher efficiencies, they must follow the sunlight and be kept clean.

Solar radiation is transmitted through the glass plates covering the face of the collector and then absorbed by a blackened metal sheet at the rear. Tubes carry the heating element—usually water, air or some other gas—through the intervening space. As the metal sheet warms up, the water or gas is heated to temperatures of 100 to 200 degrees Fahrenheit, depending on conditions. Heat losses are minimized by rear insulation and the overlying glass covers.

The system also includes an insulated storage tank for the heated material, and an auxiliary power supply unit for those periods when the sun fails to appear for several days. The solar system is not totally self-sufficient, because in addition to the periods when the sun doesn't shine it still needs a pump to keep the water circulating or a fan to blow the air. Overnight heating is no problem, because the storage tank accumulates enough heated matter during the day to last through the night, and another day or two for that matter.



MAKE YOUR OWN—*Schematic diagram outlines a solar installation for home or factory which heats in winter and cools during the summer.*

Current efforts are concentrating on adapting solar heating to conventional systems in existing homes—"retrofitting" in the parlance of the trade. Depending on which expert you're talking to, the cost of "solarizing" a home today could cost anywhere from $800-$3000. Incorporating solar heat into a newly-built home "generally runs about twice as much as an oil-fired hot water system and three to four times as much as an electrical resistance system," says Dr. James E. Hill of the National Bureau of Standards. Estimates also vary on how long it would take a solar system to pay for itself in lowered fuel costs, but six to ten years are the most frequently mentioned periods.

Several small operations have recently begun marketing solar energy components for the home, "but I don't think the nation will be affected by people like this," says Hill. "It will take people like General Electric and Westinghouse before there is any real impact." He expects some of the major U.S. firms to begin marketing combined systems, in which the conventional capacity will be strictly auxiliary, within three to five years.

In a temperate, sunny, central U.S. location, a house with 1,500 square feet of floor area could get about three-quarters of its heating and cooling needs from a 600 to 800-square foot collector and 2,000 gallons of hot water storage. Careful house design, incorporating effective use of insulation, roof and wall orientation and window arrangement, can lower the heating and cooling requirements further.

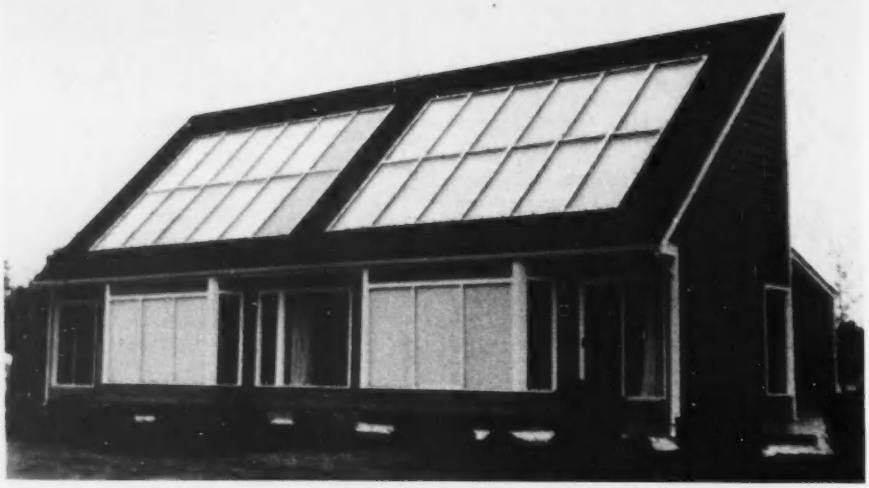
Solar energy use is being explored at the National Bureau of Standards, where solar collectors mounted on the roof of a townhouse will collect and store the sun's energy for cooling and heating purposes. The townhouse experiment is designed to produce standard test procedures for solar systems.

The townhouse will be equipped with "state-of-the-art" systems manufactured by commercial firms presently considering the production of solar heating equipment. This house has been studied extensively over an 18-month period and its thermal characteristics are better understood than those of any other such structure. It has been moved to a site on the NBS grounds and will be tested with its conventional heating equipment before beginning operation as a "solar house" this spring.

Scientists at the University of Delaware are working on a test house which would be the first to convert sunlight into both heat and electricity. "If mass produced, this system wouldn't add to the cost of a house," says project director Dr. Wolfgang Boer.

Refrigeration, too

Research in the refrigerator driven by solar energy has been insufficient to permit immediate residential usage, according to Dr. Betsy Ancker-Johnson, Assistant Secretary of Commerce for Science and Technology. "The ammonia-water absorption refrigeration system is considered to be in the forefront of development," she says, "although current research is also being directed toward a lithium bromide and water system. In concept, the refrigeration system is identi-



TODAY—*This test house at the University of Delaware is designed to convert sunlight into both heat and electricity. The project's director says that, if mass-produced, the system employed would not add to the cost of a house.*

cal to the gas air conditioner, except the heat required to evaporate ammonia from the ammonia-water solution is supplied by thermal energy derived from the sun instead of being supplied by a gas flame."

The natural conversion of solar energy into plant materials by photosynthesis and the further conversion of this stored energy in more concentrated forms such as natural gas, petroleum and coal, is the basis of the world's fossil fuel supply. Researchers are seeking methods to speed up this production through similar processes in order to restore diminishing stocks of fossil fuels.

Fooling Mother Nature?

Large scale photosynthetic production of plants at induced efficiencies far exceeding the agricultural standard—3 to 5 percent, as opposed to 0.1 percent—could supply materials to serve directly as fuels for man's energy needs or that could subsequently be converted into high quality fuels. In addition to these grown products, large amounts of solid wastes which are currently creating major environmental problems could also become a rich energy source. As any viewer of the evening television news can attest, several U.S. cities are already using their solid wastes as power sources.

While solid fuels produced through solar energy would cost from two to five times as much as coal, gaseous and liquid fuels produced in the same manner would cost about the same as coal.

The AEC recommendations call for the building of at least one pilot plant where solid waste is converted to methane by anaerobic fermentation. The process converts, in the absence of oxygen, a large percentage of the carbon content of the material to methane and carbon dioxide. The Solar Energy Panel concluded that about ten percent of the nation's gaseous fuel needs could be supplied through this method by the year 2000.

Through the use of high temperature selective solar absorber coatings and concentrating the reflected rays of the sun, temperatures suitable for operating standard steam turbogenerators can be achieved.

Estimates of efficiencies for converting solar energy into electricity range from 20 to 30 percent. In the southwestern United States approximately ten square miles covered by such reflectors, sometimes referred to as a solar farm, would be needed for a 1000-megawatt power plant.

"Solar farms" involve batteries of collectors which concentrate heat to run a turbine. Different versions of this concept involve laying out mirrors around a tower, which reflect rays to a spot on the tower where the heat can be absorbed in sufficient quantities to power a turbine, or laying out great numbers of collectors similar to the ones employed on residential rooftops and channeling the heated output of all of them to the turbine.

Mass production

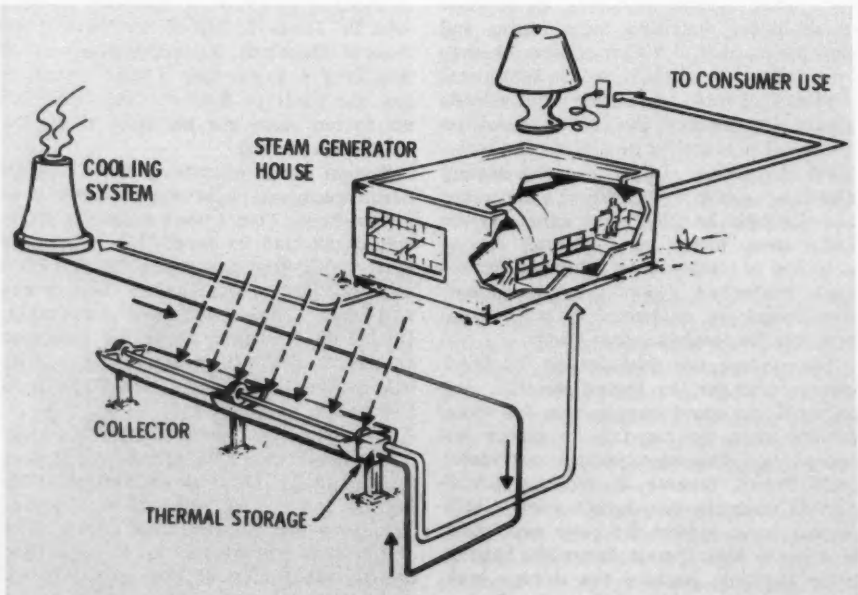
There are no technical limitations that would prevent a solar thermal power station from being built today. The question is whether it would be economically competitive with other methods of power generation. The capital cost is projected to be about two or three times the cost of today's conventional power station.

It is quite probable that this approach will offer a viable alternative to fossil and nuclear electric power generation in certain parts of the country, as fuel costs rise and environmental controls increase the capital cost of those plants.

For the past year, the University of Minnesota and Honeywell Inc. have jointly conducted a Solar Thermal Power Project for the National Science Foundation to establish the technology which could lead to widespread use of solar power.

During the past decade, Honeywell has helped develop solar absorber coatings for the nation's space program.

"We are interested in several parts of the potential solar energy market because we believe that solar energy systems and equipment offer promising and attractive new business opportunities for advanced-technology companies," says Honeywell Vice President Dr. Van W. Bearinger.



DOWN ON THE FARM—*Large numbers of collectors on a solar farm "harvest" the sun's energy in the form of heat and transfer it to a turbogenerator.*

Roger N. Schmidt, manager of Honeywell's solar energy programs, describes progress to date. "A trough concentrator focuses the sun's energy onto a coated heat pipe, which transfers the thermal energy to one end with a thousand times the effectiveness of a copper bar. The heat is used to generate steam for electric power production or is stored for later generation of electricity. Each 40-foot long, 10-foot wide collector is a single module which lends itself to volume production and can be easily placed and maintained in the solar field. Computer simulations have verified technical feasibility of these collectors—the key element in the solar power system.

"Therefore, engineering efforts have been directed toward questions of economic feasibility," Schmidt continues. "For example, there were serious concerns on the availability of suitable surface coatings for the concentrator and receiver. Under the current program, concentrator surface materials are being tested in Florida, Arizona and Minnesota. Preliminary results have been favorable.

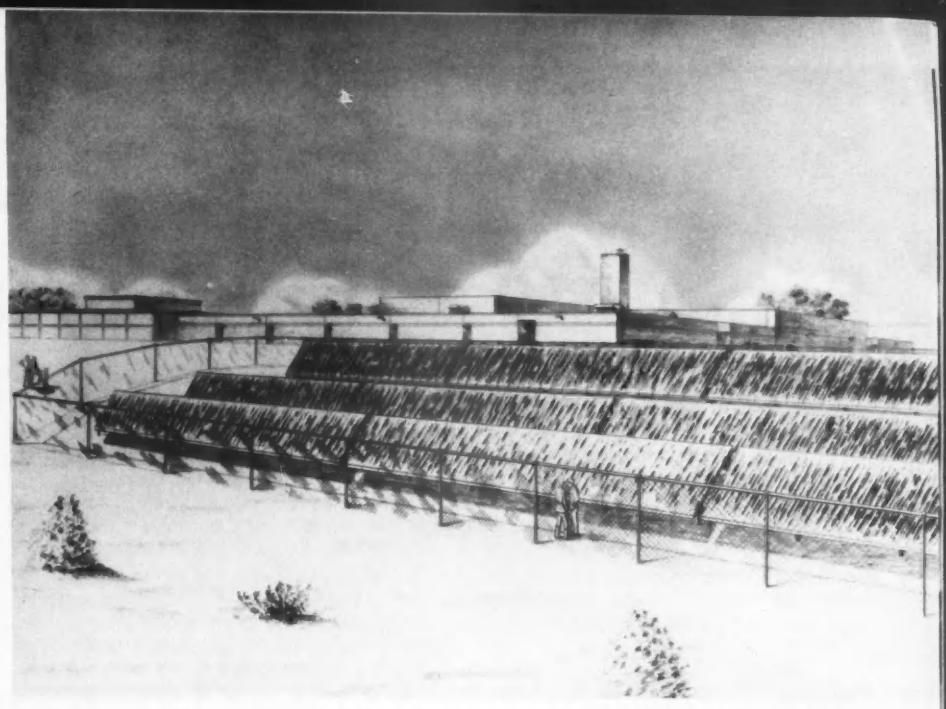
"Honeywell has made independent cost estimates for a solar steam generating plant to be built and operated late in the 1980's. Our estimate of initial cost in 1973 dollars is approximately $1000 per KW installed based on present materials and on volume production techniques. This estimate is in reasonable agreement with other independent estimates and is at least twice the cost of current light water nuclear plants.

"We are encouraged by this estimate" says Schmitt, "because we foresee that the corresponding costs of alternate systems with their environmental controls will increase significantly by the late 1980's. It is also possible that the $1000 per KW estimate may be lowered through additional engineering development and new volume production techniques."

Photovoltaic process

Photovoltaic conversion is based on use of the photovoltaic effect on a semi-conductor such as silicon in devices which are commonly called solar cells. The process involves absorption of light which then generates an electrical current which can be collected on contacts applied to the surfaces of the semi-conductor. The theoretical efficiency of this conversion process is 25 percent but it has not been reached.

Solar cells made from silicon have supplied essentially all of the power used by spacecraft. Their performance and reliability in space are well established. For earthbound energy applications, solar cells are in use in the U.S., Great Britain, Japan and other countries in the form of small "packaged power" systems to energize transistor radios, harbor and buoy lights, highway emergency call systems and microwave repeater stations. However, because of the very high cost of solar cells, large photovoltaic systems for terrestrial applications have not been built, although the technical capability exists.



TOMORROW—*This experimental solar heating system is being installed in a suburban Minneapolis junior high school by Honeywell under a National Science Foundation contract. When operational, it is expected to save 12,500 gallons of fuel oil annually.*

Harnessing the wind

Solar energy sustains the winds. On an annual basis, the winds are remarkably repeatable and predictable. It is calculated that the power-generating potential in the winds over the continental U.S. and the Aleutian Arc is considerably greater than our present installed capacity. The kinetic energy of the moving air can be extracted by an aeroturbine or similar device. A wind energy conversion system for large-scale power production would incorporate a storage capacity, to allow for the times when there is no wind blowing during peak energy demand periods.

Sixty years ago, wind power serviced small generators throughout the world. In the 1940s a 1300-kilowatt wind energy converter was built and operated for a year in Rutland, Vermont. Steady improvements directed toward large-scale applications were made through the 1950's, but the availability of large amounts of cheap fossil fuels made the further development of wind power unnecessary.

However, recent events have prompted a reevaluation of the merits of wind power, and several large scale wind power systems with 2000-kilowatt aeroturbines have been proposed. These units would be located one-eighth to one-quarter of a mile apart and linked together to form an integral system.

Cost estimates for large scale wind power systems indicate they could compete with today's fossil and nuclear power plants.

Between the Tropics of Cancer and Capricorn, where the intensity of incoming solar energy reaches its peak, 90 percent of the earth's surface is water.

The Gulf Stream carries 1000 to 1500 million cubic feet per second of near tropical sea water through the Gulf of Florida, in a stream about 20 miles wide. It is possible to modify a conventional energy conversion system to convert some of the energy contained within the warmer water into electricity. The conversion efficiency would be quite low—around 2 percent—and the cost of such a facility is expected to be about double that of large conventional power plants. A collection system of units moored on one mile spacings along the length and across the breadth of the Gulf Stream is thought capable of an annual energy production about ten times the present electricity generation in the United States.

Feasibility shown in 1929

The proof-in-principle of the generation of electricity using a vapor cycle operating between the warm surface and cold depths was demonstrated in 1929. A technical and economic feasibility study of a 400,000-kilowatt central power station based on this concept is under study.

The knowledge is there and in most cases the equipment is there for full-scale development of solar energy. To date the only thing lacking has been any real sense of urgency that would justify the very substantial sums involved.

Perhaps the energy crisis will supply that sense.

Better Mass Transit Systems Seen Luring U.S. Commuters From Cars

An ambitious, many-sided program designed to persuade citizens to leave their cars at home, unless operating a car pool, and to patronize reliable, comfortable, and rapid forms of mass transportation is in full swing, encouraged and supported by the federal government. It has major implications for the business community and for all elements of society.

This program is part of a broader effort aimed at solving the entire transportation problem in urban areas.

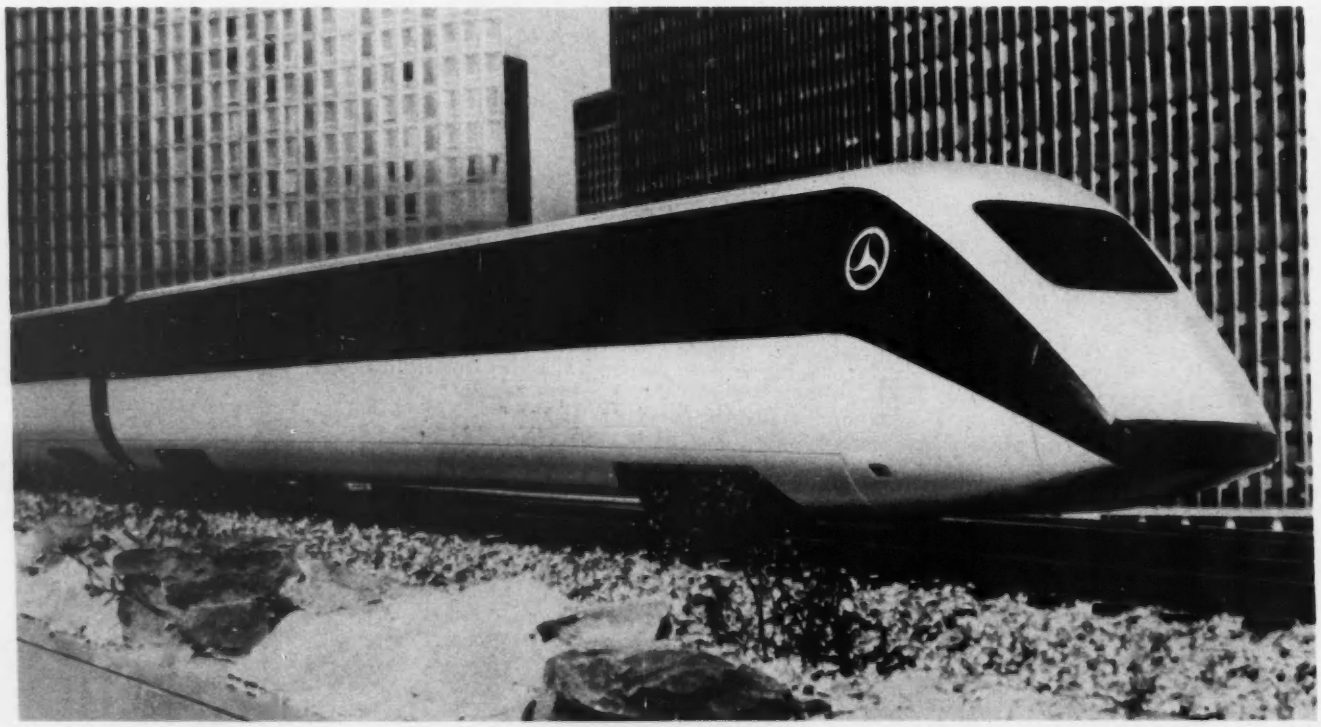
To the extent that the program is successful, it promises a multitude of rewards, such as conservation of energy, reduced traffic congestion and lower transportation costs, less pollution, and hopefully a shorter travel time to work for most people. It also should help to restore the inner core of numerous cities.

A number of devices are being adopted to get the citizen out of the auto and back into mass transit. Included are a variety of ways to free buses from traffic jams and to enable them to travel faster and more surely; more buses that are comfortable and that will run on time and afford most riders seats; revival and promotion of various forms of rail transport; and finally the gradual introduction of various innovations to make mass or group travel more comfortable, attractive, faster, and more appealing to particular groups such as the handicapped and elderly.

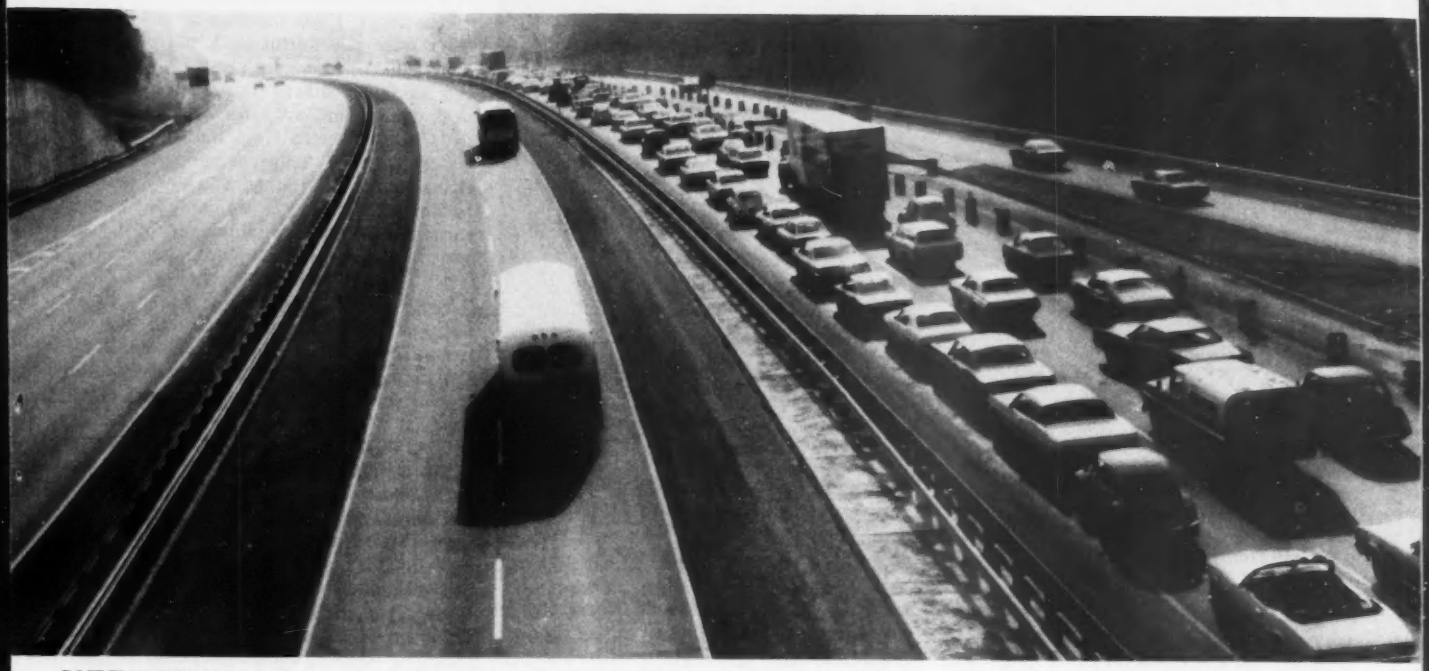
Accelerated effort

The federal agency spearheading this effort is the Urban Mass Transportation Administration (UMTA), one of the operating divisions of the Department of Transportation. UMTA was established in 1968 when federal responsibility for urban mass transportation was shifted to the Transportation Department from the Department of Housing and Urban Development. The Federal Mass Transportation Assistance Program was started in 1961, and has been expanded slowly. It has been greatly accelerated in recent years.

The first big break in the program was the passage of the Urban Mass Transportation Assistance Act of 1970, signed into law by President Nixon on October 15 of that year. This legislation provided $3.1 billion over a five-year period to upgrade, extend, improve and develop new bus, rapid transit and commuter rail systems over the nation. Congress stated in the Act its intention to make $10 billion available by 1982 for urban transit improvements. In 1973, Congress opened up the Highway Trust Fund to mass transit, authorizing $2.5 billion more over a three-year period.



ADVANCED CONCEPT TRAIN—*Two prototypes of this aluminum structured commuter train with vandal resistant acrylic plastic side panels are due for delivery next year. The two-car units are designed to conserve energy by using on-board energy storage.*



SAILING THROUGH—*Early morning fogs hold no terrors for rush hour riders on the express bus lanes of Northern Virginia's Shirley Highway. In four years of operation, an estimated 4,000 autos have been diverted from this artery carrying traffic into Washington.*

President Nixon recently sent to Congress for action the Unified Transportation Assistance Act which would provide, over the next six years, approximately $16 billion for public transit, and for the first time would make federal financial assistance available for transit operations.

Key features of the new program are: $2.4 billion in UMTA funds to be distributed to the states, earmarked for major metropolitan areas by formula for the fiscal years 1975 through 1977; $4.2 billion in federal grants for public transit projects over the six-year period covered by the bill; $6 billion in general funds for allocation to the states under a new unified urban transportation assistance program; and provision for highway funds for bus purchases in rural and small urban areas.

Under the new program, the federal government would put up 80 percent of the funds for urban transit improvements, and the states and communities 20 percent.

"The basic purpose of UMTA," says Frank C. Herringer, UMTA Administrator, "is to develop programs to improve urban transportation rather than mass transportation in itself. We in UMTA cannot ignore the importance in the whole picture of the better use of highway facilities. There has been some tendency in the past to take the more narrow view, but it must change.

"In looking closely at the problem, we have to look at car pools, taxis, jitneys, other personal transit modes, and subscription buses as well as mass bus service and rail transit. The whole objective is to work with the Federal Highway Administration, and this we are doing. In the field, our people work with the FHWA in joint planning of programs. In the Washington area, for example, we have several continuing task forces. We need procedures for administering these efforts. Part of the planning process is to encourage local areas to look at all alternatives."

Herringer says that, while there are no quantitative goals, the general aim is to see multiple occupants of vehicles.

"The energy crisis is a stimulant to achieving mass transportation," he adds. "The energy problem presents a tremendous opportunity to win people to mass transportation. The World War II experience confronted people with the necessity of using mass transportation, but the service was so disappointing that at the first opportunity they went back to their autos. We don't want that to happen again.

Forming the habit

"Habit is a highly important factor in the use of mass transit facilities, as in so many things. In Europe, people are accustomed to the use of mass transportation facilities. We would like for Americans to develop such a habit, but to persuade them to do so they must like the habit and find that it suits their purposes. We are trying to make transit operators aware of the potential of mass transit.

"It is important to recognize that there is considerable evidence to indicate that the physical character of the ride, or even the fare in itself, may not be the most important factor in whether a person wants mass transit. What really matters is service.

"We have to have the transit companies focusing on the important matters, such as giving the passenger a seat in most cases, charging him a reasonable fare, and providing adequate comfort and a bus that will run on time and will take him where he is going in a reasonable time. These are the things that the average passenger wants. Attractiveness is fine, but it is less important than these essentials."

The four major needs for dealing with the urban traffic problem, he says, are staggering work hours, better scheduling of bus service, improving the traffic flow, and providing more good, comfortable buses.

An improved system for staggering work hours would increase the capability of mass transit facilities to handle passenger traffic by spreading out peak periods, and enhance the prospect of getting a seat.

"The bus," he comments, "is the mainstay for handling urban traffic. For most cities, the bus is the principal mode of transportation. But we must look at ways to make the bus more appealing, such as provision of special bus lanes, more comfort, and preferential treatment at traffic lights.

"Rail transport certainly will be helpful to some cities, but of the 250 cities in the country where transit is a problem not more than 20 could be considered candidates for rail systems. As for the more advanced systems like personal rapid transit, I don't see any substantial deployment in the next five to eight years. These are things for the future. Personal rapid transit must be in loop and shuttle configurations. It will appeal more to individual groups, such as the handicapped and elderly."

Herringer explains that, while federal aid

PERSONALIZED SERVICE—*Haddonfield, New Jersey's Dial-A-Ride demonstration project is moving into its second phase, after a successful introductory period. This type of personal transit system is particularly helpful to the elderly and handicapped.*

programs emphasize local initiative and responsibility in undertaking and carrying out projects, this does not mean that the federal government will abdicate its role as a helpful partner. Rather than dictation, he says, it will supply information which will help local people in making decisions.

In particular, he adds, UMTA will take a careful look at big rail and other large projects involving substantial amounts of money to see that the money goes for a sound and effective purpose.

"I believe Congress expects us to do that, and it is right that it should," he says. "The taxpayer has a right to know that his money is going to be used for responsible programs."

Basic fact: fewer riders

The basic fact about urban transportation is the drastic decline that has occurred in public patronage of mass transit facilities since World War II. In 1973, the number of passengers on mass transit lines in U.S. urban areas totaled 6,660 million, an increase of about 1.5 percent over the total for 1972. This was the first increase in mass transit rides since 1946.

Despite the slight increase in 1973, the number of mass transit passengers was less than 30 percent of the 23,254 million rides recorded in 1945. This decline is dramatic evidence of the extent to which urban travel has shifted to the automobile.

The decline occurred despite the fact that the population of U.S. urban areas more than doubled between 1940 and 1970.

In a losing effort to enable transit lines to break even despite the drop in patronage, the average fare was increased from seven cents in 1945 to 31.5 cents in 1973.

Herringer comments that the turnaround in patronage in 1973 shows the effect of the improvement in transit equipment and service in recent years. These improvements to a large degree were financed with federal funds, just as were the expansion and improvements in highways that accelerated the shift from mass transit to the auto.

From February 1965 until recently the UMTA aid program is credited with preserving or stabilizing 119 city bus transit systems, ranging from small city systems to those of large metropolitan areas.

UMTA has made 381 capital improvement grants totaling nearly $2.5 billion. The UMTA program has resulted in the following: nearly 15,000 buses, 2,350 rapid rail transit cars, 1,009 commuter railroad cars, 13 commuter diesel locomotives and 10 ferry boats have been purchased, 196 miles of rapid rail transit track extensions have been built or placed under construction, and 77 bus garages and service facilities have been constructed or modernized.

In addition to providing more new buses, UMTA is promoting the development of improved buses. Three major bus manufacturers—AM General, General Motors, and Rohr Industries—have been given contracts to develop individually and separately a "Bus of the Future."

The "Transbus," as it will be called, will feature modern design, wider doors, seven-inch steps, more efficient propulsion systems, and special features to aid the elderly and handicapped.

Comparatively inexpensive ways of improving bus service include priority entry to freeways, priority at traffic signals, and reserved lanes on city streets and highways, both in the direction of traffic and counter to the flow of traffic. A more expensive method is exclusive bus lanes.

One such exclusive bus lane is already operating on Shirley Highway in Northern Virginia, handling Virginia traffic to and from the nation's capital. This $6 million project was opened in September, 1969, when about 1,900 passengers traveled on 39 transit buses during peak morning hours. Now 17,000 passengers ride 370 buses over the 11-mile roadway during the morning peak hours, and an estimated 4,000 autos have been diverted from the highway.

Secretary of Transportation Claude S. Brinegar recently announced the start of a nation-wide effort to promote the use of carpools, a project administered by UMTA and the Federal Highway Administration.

"If the nation could increase auto occupancy for urban work trips from the present average of 1.6 persons per auto to just two persons," Brinegar said, "we could save five billion gallons of gasoline a year."

Projects aimed at easing the urban traffic problem are multiplying. For example:

► UMTA has awarded grants totaling $38.8 million to the Massachusetts Bay Transportation Authority to buy new rapid rail cars, trolley coaches, and a variety of safety improvements.

► UMTA has awarded contracts totaling $1.5 million for the design phase of a Dual Mode Transit System Development Program, combining a driver-operated mode on streets or highways and an automated mode on fixed guideways.

Rail cars of the future

To advance the development of transit rail cars, UMTA has produced a "State-of-the-Art" rail car incorporating the best of existing technology.

Going beyond the "State-of-the-Art" car, UMTA has awarded an $8 million contract to the Garrett AiResearch Manufacturing Company of Torrance, Calif., for construction of an experimental prototype two-car Advanced Concept Train designed specifically to conserve energy by using on-board energy storage and retrieval systems, and to provide maximum passenger comfort.

Preparations are being made for the next phase in the development of the personal rapid transit project in Morgantown, W.Va., connecting two campuses of West Virginia University and the Morgantown business district by means of 2.2 miles of two-way concrete guideways. A heating system for the guideways is being installed and 40 cars should be ready for testing next year.

A UMTA grant of $1,750,000 to the New Jersey Department of Transportation will aid the second phase of the Haddonfield, N.J., Dial-a-Ride demonstration project, a personal transit system of particular advantage to the elderly and handicapped.

The Federal Railroad Administration is developing a prototype tracked air cushion vehicle capable of traveling 150 miles an hour, and is developing a vehicle that eventually may reach 300 miles an hour. It will resemble a train powered by three jet engines.

"There are many grounds for hope that we shall eventually solve urban transportation problems," comments UMTA Administrator Herringer.

U.S.-USSR Trade, Economic Council Holds First Session In Washington

The recent first plenary session of the U.S.—USSR Trade and Economic Council took place against a background of events that included a White House dinner for the Council's directors, talks with Cabinet members and Congressional leaders, and visits to U.S. industrial installations across the country.

The Council, a bi-national corporation, aims to strengthen trade ties and economic relations between American businessmen and Soviet organizations. It was set up at a meeting in Washington last July 12 that followed upon the June summit talks of President Nixon and Soviet First Secretary Leonid Brezhnev.

The Council's initial meeting, held in Washington Feb. 26, saw approval of a revised charter and by-laws, confirmation of officers, agreement on budgetary items and arrangements for offices in Moscow and New York, recommendations on banking, legal and accounting matters, and a decision to re-convene next in Moscow in May 1975.

The Soviet delegation was headed by Minister of Foreign Trade Nikolai S. Patolichev and the Deputy Minister, Vladimir S. Alkhimov. It included other officials of the Foreign Trade Ministry, leaders of Soviet Foreign Trade Organizations, the chairman of the Soviet Bank for Foreign Trade, officials of GOSPLAN, the Soviet planning agency, and several industrial plant managers.

The U.S. membership in the Council is drawn entirely from the private sector. Harold B. Scott, a New York businessman who has been Assistant Secretary of Commerce for Domestic and International Business, is the Council president. Donald M. Kendall, chairman of PepsiCo, is co-chairman of the Council board, serving alongside Deputy Minister Alkhimov in that position.

NOTE: A report on current economic trends in the Soviet Union will be found on Page 30.

Altogether, the Council's board has 26 members from U.S. private industry and 26 representatives of the Soviet state-run industrial and trading enterprises.

COUNCIL LEADERS—*Discussing the plans of the U.S.-USSR Trade and Economic Council are (from left) Harold B. Scott, the president; Donald M. Kendall, co-chairman; Nikolai S. Patolichev, Soviet Minister of Foreign Trade, who is an honorary director, and Vladimir S. Alkhimov, co-chairman.*

The Council's first board meeting was held at the Madison Hotel in Washington. It was followed by a reception at the Soviet Embassy. That evening President Nixon was host to the directors at a dinner in the White House.

A reception was held in the Council's U.S. headquarters, an office suite at 280 Park Avenue, New York City. The Soviet directors have designated a number of trade specialists from the USSR to serve alongside American colleagues in these offices. It was announced, meanwhile, that the Soviets are arranging appropriate counterpart office space in Moscow for a staff there to be headed by John T. Connor, Jr. Connor is former deputy director of Commerce Department's Bureau of East-West Trade.

Among those who addressed meetings in Washington were Secretary of the Treasury George P. Shultz—who is an honorary Council director with Soviet Minister Patolichev; Secretary of Commerce Frederick B. Dent, and Ambassador William D. Eberle, the President's Special Representative for Trade Negotiations. Senator Russell B. Long of Louisiana, Chairman of the Senate Finance Committee, led a Congressional breakfast discussion with Minister Patolichev and others in the Soviet group.

At the conclusion of the Washington meetings the Soviet delegation fanned out for business visits in various parts of the country. Among the stops were:

General Motors Corp., Ex-Cell-O Corp., and the Cross Co., in Detroit; Bank of America, Kaiser Industries, San Francisco; Atlantic Richfield Co., Los Angeles; Xerox Corp., Gleason Works, Rochester, N.Y.; IBM Corp., Armonk and Poughkeepsie, N.Y.; Chase Manhattan Bank, Engelhard Metals and Chemicals Corp., General Electric Co., New York; PepsiCo, Purchase, N.Y.; Landis Tool, Waynesboro, Pa; M. W. Kellogg Co., Armco Steel, Houston; Minnesota Mining and Manufacturing Co., St. Paul; Swindell-Dressler Co., Rockwell International, Pittsburgh; Ingersoll Products Division, Chicago; Textron, Inc., Providence, R.I.; Westinghouse Electric Corp., Philadelphia, and Cleveland Crane & Engineering Corp., Wickliffe, Ohio.

'Vital Competitive Edge' Seen Going To Firms With Sound Energy Management Concept

For survival and the "competitive edge," a U.S. business today must re-orient its operations, its style of management and organization to take into account that energy sources have radically increased in value, Secretary Dent has said.

Outlining an energy management philosophy that delves into every aspect of business operation, the Commerce Secretary expressed the opinion that sound energy management will give businesses a "vital competitive edge" and make a difference in the bottom-line figure on the balance sheet.

Dent, addressing a regional energy meeting in Denver recently, noted that exotic sources of energy will some day be commonplace, and posed some questions for the interim.

How shall we maintain productivity that has made us the envy of the industrialized world?

How shall we sustain employment? Keep people working? Keep factories open? Assure the profits so vital and essential to competitiveness in the marketplace?

Energy management means management control of energy use with the same degree of responsibility as might be found in marketing, production, physical distribution or other business areas.

"Some (businesses) are coming to grips with fact that unless they begin to master control of their energy resources through application of sound business techniques, they may lose control altogether," Secretary Dent noted.

"Others are beginning to recognize that in many subtle ways energy management will not only permit them to survive, but will provide them with a vital competitive edge," the Commerce Secretary continued. "It will not only see them through to the day of energy independence, but will assure their continued healthy and dynamic economic growth."

Energy management has broader implications than merely dialing down thermostats, improving insulation, turning off lights, or refining production processes.

In purchasing, Dent pointed out, value judgments as to a material's worth or a supplier's service must not only include such considerations as delivery time, volume discounts or deferred billing, but how the product or service affects the company's energy picture.

Secretary Dent said much of the information necessary to produce such judgments already exists, but much remains to be done before it is organized in sufficiently useful fashion.

Simply by becoming more energy oriented, a purchasing department can make increasingly important contributions to energy conservation if it begins to assign specific energy values to materials, lead time and warehousing considerations.

Physical distribution is also a key area. As the cost of movement of materials and finished products begins to be affected by the cost of fuel, the prevailing inter-relationships between the various modes of transportation will have to be examined.

High-value-added or high-cost-per-pound commodities which have in recent years been found to move most economically by air because of total-cost-of-distribution considerations, may in some cases be approaching a point when they can no longer bear the additional expense of higher transportation costs.

Optimum tradeoffs

"Only by deliberate study will the optimum tradeoffs among energy conservation, customer service and cost be determined," Secretary Dent emphasized.

Two challenges emerge in product design and development. Not only must the design engineer consider the energy consumption parameters of in-house manufacturing processes, but increasingly he will be called upon to improve the product performance curve as well.

"The producer who can match his energy interests with those of his customers is in the best position to prosper as the pressures of the shortage make themselves more subtly felt," Secretary Dent continued.

In marketing, businesses are having their vision and flexibility tested as never before.

"Successful marketers of the future will be those who have not committed themselves to a particular position and closed the doors to others," Dent asserted, "They will be alert and resourceful, responsive to the needs of the marketplace.

"These marketers," the Commerce Secretary said, "are taking the age of energy scarcity seriously. They are taking a fresh look at their customers and customers' problems, taking a fresh look at their product lines, sensitive to the fact that customer desires are likely to undergo changes as the energy environment changes."

Cementing relationships

Tomorrow's successful marketers are cementing relationships with suppliers today. They are making sure that they have earned their suppliers' loyalty through just and equitable purchasing policies, so that their energy shortage problems will not be compounded unnecessarily by materials and product shortages.

Where marketing expenses or costs are out of line, a number of firms are reviewing marginal products, channels of distribution and sales territories. Those entities that are chronically unprofitable are being weeded out in the interest of energy conservation.

Moreover, tomorrow's sucessful marketers are vigorously preserving the marketing resources they need, helping salesmen help customers solve their problems, always keeping in mind that the shortages created by the energy crisis are an opportunity too. The very definition of a shortage includes the fact that customers' needs are not being met.

In short, businesses are reassessing their marketing philosophy, making sure that it responds to the realities of energy supply and the needs of their company, their industry and society.

"There is a place for the application of energy management in every phase of business operations," Dent concluded, "and without recognition of this, business will not be able to achieve the energy goals set in the timespan allotted."

Pipeline's Effect On Alaska Fisheries Industry Studied

Anticipating the operation of the Alaskan oil pipeline, scientists are studying the natural levels of crude oil hydrocarbons in biological specimens found in Prince William Sound. The information is expected to provide reference data for measuring changes that may take place in the hydrocarbon levels after the pipeline is in operation.

The Alaskan fisheries industry is said to be interested in knowing what effect, if any, the operation of the pipeline will have on hydrocarbon levels in biological specimens and whether these levels will increase.

The terminal of the Alaskan pipeline will be the port of Valdez on Prince William Sound. It is estimated that tankers operating out of this port will be transporting up to two million barrels of crude oil a day once in operation.

A series of studies is being conducted jointly by Commerce's National Bureau of Standards (NBS) and the National Oceanic and Atmospheric Administration (NOAA). The studies are headed by Dr. Stuart Cram, an NBS chemist, and Dr. Herbert Bruce, an Alaska-based NOAA oceanographer. The research team is collecting sediment samples and marine life. The team will return to Alaska this spring to continue the work under a timetable which calls for completion of the studies before construction of the pipeline, scheduled to begin this year, is completed.

Marine life collected includes crabs, herring, clams, mussels, limpets and algae. The different species of marine life are representative of different feeding habits and physiological behavior. They serve as potential indicators of crude-oil accumulation.

The sampling involves back-breaking work in frigid waters and mud. Samples are collected at low tides and from areas in which the population or distribution of a species will not be disturbed. Special sampling methods and techniques have been developed to avoid contamination of specimens.

The methods include a "quick freeze" and specimen storage over dry ice within minutes after sampling. Bacteria-free collection bottles are used. Dry ice, equipment and supplies must be trucked long distances over mountains for transfer to the research vessel.

As an example of the careful work being done, a single trace organic analysis of macoma clams requires that more than 10,000 of the clams be collected and hand-sorted from algae, rock and more than 20 cubic meters of tidal silt and sediment.

Aside from the immediate interest to the fisheries industry, the information obtained by the studies will be important in appraising the pipeline's long-term economic, social, and legal impact on energy problems and the ecology.

Likewise, the studies afford an unusual opportunity for scientists to characterize an ecological system before the development of a major environmental impact.

The hydrocarbons are measured in parts per billion. Gas chromatographic methods are used to accurately measure hydrocarbon concentration changes by species, geographical location and seasonal variation.

The samples collected in Alaska are brought to NBS laboratories at Gaithersburg, Md., and are analyzed by techniques specially developed at NBS for the purpose. These include high-resolution computer-automated gas chromatography, high-pressure liquid chromatography and gas chromatography-mass spectrometry.

To isolate the crude-oil hydrocarbons from biological tissue, NBS has devised additional techniques representing the best approach to the needs of the projects.

Hydrocarbon concentrations as small as a hundreth of a part per billion are being measured by these sensitive and special techniques.

Alaska is a unique natural laboratory for this kind of research because of the primitive nature of its natural environment. The only significant oil contamination affecting Prince William Sound resulted from the leakage due to the 1964 earthquake.

After development of basic information on natural hydrocarbon levels, follow-up studies by the scientists may take them to the north slope of Alaska, into many of the hundreds of salmon-spawning streams, or along the Continental Shelf as new areas of oil exploration are developed.

The expectation is that a succession of follow-up studies will be carried out after collection of information for the baseline data study relating to natural hydrocarbon levels in Prince William Sound has been completed.

EFFICIENT COLUMNS — *High resolution gas chromatographic columns, efficient in separating organic compounds, are being applied in the Alaska baseline studies.*

ALASKA FISH STUDY—*Stuart Cram in the cold light of morning, researching effects of oil pipeline on the Alaskan fisheries industry. Instruments can be used to resolve several hundred organic hydrocarbons from complex mixtures such as crude oil in one analysis.*

Energy Management Digest

"Retailers can derive important benefits from intelligent energy conservation. The likelihood of store closing and restrictive legislation can be reduced. Employee and customer inconvenience can be kept to a minimum and operating costs can be cut." The Commerce Department's newest energy management publication "Economic Sense for Retailers" spells out how a well-planned energy management program can actually add up to an increase in bottom-line profits along with enhanced employee and public goodwill. The booklet urges retailers to appoint a top-level energy coordinator and conservation committee to conduct an energy audit, establish goals and promote the program. It details potential savings of each energy-using item in the average store. Text for the booklet was developed with the assistance of Ned Artmen, Governmental Affairs Office, Sears, Roebuck and Co. It is available from the Office of Energy Programs, U.S. Department of Commerce, Washington, D.C., 20230.

A "good fall out" from the fuel shortage, notes Secretary of Transportation Claude Brinegar, is the dramatic decrease in traffic deaths. With the 55-mile-an-hour speed limit in effect in January, traffic deaths were down 23 percent from the same period a year ago. Traffic deaths totaled 2,928 in January, compared with 3,781 in January 1973. "We have worked for years to find ways to save lives from automobile crashes," Secretary Brinegar comments, "so this is one good by-product of the fuel shortage."

Wise use of lighting is among the greatest opportunities for energy conservation. Dr. John H. Gibbons, Director of the Federal Energy Office's energy conservation program, lists tips for energy savers to use in home lighting. Most are common sense approaches applicable to many businesses and industries. For example, Dr. Gibbons advises: 1 - Remove one bulb permanently. Replace it with a burned-out bulb for safety. Replace half of the others with bulbs of the next lower wattage. 2 - Use higher lumen watt light sources. A fluorescent lamp, for instance, is three times as efficient in energy as an incandescent bulb. 3 - Do not use long-life incandescent lamps. They're more energy consuming and less efficient than ordinary bulbs. 4 - Use one large bulb rather than several smaller ones. One 100-watt incandescent lamp, for example, produces more light than two 60-watt lamps.

The Small Business Administration is giving priority to energy-related loans. SBA also has a task force assessing the impact of energy and materials shortages on the agency's policies and programs. Small businesses are encouraged to keep SBA advised of energy problems either by communicating with Washington or the nearest point of contact in the field. SBA's Washington energy office phone number is 202-382-8896.

North Dakota is considering the possibility of developing its lignite (soft coal) reserves as an alternative energy source which, state officials anticipate, could play a large role in helping the nation meet its energy needs. The state is using a $52,000 grant from Commerce's Economic Development Administration to study the impact of establishing lignite gasification plants and electric power generating facilities in North Dakota. The study includes an analysis of the impact of various levels of lignite development on natural resources and physical infrastructure such as roads and utilities in communities affected, and an assessment of the capabilities of communities to cope with the population influx anticipated with major lignite development. It also will review commercial development, anticipated

requirements of the industry and increased population, and analyze the impact of lignite development on agriculture and tourism in order to assure an optimal mix of all three activities.

The industrial sector's leadership in energy conservation has drawn frequent commendations from Secretary Dent. Two industrial efforts cited by the Commerce Secretary in a recent address were: General Mills, which kicked off its energy conservation program in November and reported December results of 18 percent fuel savings compared to the previous year after correction for weather differences. In one General Mills facility the savings was 26 percent. Coca Cola of Bakersfield, Calif., a soft drink distributor, rerouted its trucks and accomplished the same service at considerable fuel savings. The soft drink distributor expects to eliminate more than 100,000 miles of travel in 1974 with a savings of between 15 and 20 percent in gasoline. Other conservation measures will save about 10 percent on electrical costs.

Energy supply in the maritime industry has a "healthy look of steadiness" industry-wide, according to the Maritime Administration, but prices continue to concern many shippers. The Maritime Administration, which checks regularly with vessel operators, shipyards and port interests throughout the country, reports that the combined efforts of government and industry have reduced the energy problems to manageable proportions. However, cargo space continues to be in tight supply due to vessels making fewer voyages and steaming at reduced speeds. This results in some short-term backlogs at U. S. terminals. Although this aggravates the shortage of outward space, cargo still moves in a timely fashion. The Maritime Administration is assisting ship operators in resolving fuel shortage problems.

Thousands of U.S. national standards now in place require only more widespread use by industry and the public to make a substantial contribution to easing the energy crisis. Many more are under development--or could be developed--by standards-writing organizations that make up the American National Standards Institute. For example, many existing standards relate to the production, transmission, and generation of electric power produced in conventional plants. Approximately 350 standards cover the quality and quantity measurements of petroleum products.

One of the hottest items on the energy market today is a film "Energy Management: The Vital Difference," available for $250 from Commerce's Office of Energy Programs, Washington, D.C. The office reports that nearly 50 firms have purchased copies of the film at $250 each and an additional 107 copies are on loan to firms, groups and government agencies. The film was developed out of actual experiences of business and industry in solving energy supply problems and stresses a commitment to conservation as the key. Loan copies are available from Commerce district offices.

The energy crisis is fueling an upsurge in at least one area of today's society--the nostalgia boom. In addition to the pot-bellied stove, speed limits of the 1930s, and deeper appreciation of the coonskin coat and other nonplastic items, another venerable old institution--the double-decker bus--may be brought out of retirement. The Department of Transportation will finance the purchase of several double-deckers from Europe where they have remained in fashion for trial runs in New York and Los Angeles. The four British-made buses slated for New York will have at least 70 seats, while the buses currently operating in New York can seat from 45 to 49. The pair which will be used in Los Angeles will be made by a major West German bus manufacturer. The buses are intended primarily to increase rush-hour capacity on express runs into the cities from outlying areas. Their performance, economy, safety and public acceptance will be evaluated for a year before any decision on future purchases is made.

(This is culled from Federal Energy Office, Commerce agencies, Transportation and Interior Departments and Small Business Administration.)

Industry Highlights

Newsprint, One Supply Problem That's Easing In '74

(Industry Highlights is prepared by the Office of Business Research and Analysis, Bureau of Domestic Commerce.)

Extremely tight newsprint supplies experienced in the last half of 1973 apparently have been relieved and publishers should be breathing easier.

Census Bureau and trade association data indicate that present newspaper supply appears generally in balance with demand. That balance, however, is a delicate one which is expected to remain tight for the near term.

Growth in newsprint demand is projected at 3 percent per year through 1980. If industry projections of capacity additions total only 3 percent for 1974 and 1975 a tight balance will continue at least through those years.

Despite this observation, production capacity of the manufacturers appears adequate to meet projected demand of consuming publishers through 1975, assuming there is no repetition of production and supply disruptions that plagued the industry from July through November 1973.

A brief railroad strike and a lengthy papermill strike in Canada reduced supply available to U.S. publishers by some 400,000 to 500,000 tons during the last half of 1973, causing a critical disruption and dislocation in deliveries. The impact was greatest on the publishers of smaller papers in areas farthest from supply sources.

Manufacture of newsprint—a basic raw material of the newspaper publishing industry and base paper for a small segment of other printing industries—is a continental industry. This country currently receives in excess of 65 percent of its newsprint from Canada and many large newspapers in the United States own papermills in Canada; U.S. newsprint mills, operating at full capacity, produce about 32 to 33 percent of U.S. requirements and the remaining 2 percent comes from Scandinavia.

For 1973, U.S. requirements were met by shipments of about 3,450,000 tons from U.S. mills operating at 97 percent capacity, 375,000 tons from Finland, and 6.9 million tons from Canada. The Canadian tonnage represents close to 77 percent of that country's total newsprint production.

An abundance in Canada of long-fibered white softwoods requiring little or no bleaching is one of a number of reasons for the close ties with Canadian newsprint production. These trees produce a strong printable newsprint sheet. There is a substantial partnership of U.S. firms in Canadian production. This relationship can be expected to continue for the foreseeable future.

Like other products in the pulp and paper sector, newsprint consumption in the U.S. closely follows the Gross National Product. When the economy is booming advertisers put more money into more advertising space, using more pages to sell more consumer goods and services. During periods of slow economic growth the reverse is the case.

As the economy improved in 1972, newsprint requirements grew rapidly. The growing demand for newsprint began at a time when publisher inventories were below normal. Consumption intensified through the spring of '73 and publishers also began inventory rebuilding.

For example, publisher inventories were at a low point of 738,000 tons in December 1972. These were rebuilt through June 1973 to 965,000 tons and this level has been maintained since that time. Smaller publishers with inadequate supply arrangements or restricted inventory capabilities became apprehensive that supply would not be sufficient to maintain existing volumes of publication. Others wanting to expand or to establish new publishing enterprises in a highly profitable business environment were apprehensive of possible supply shortages. Fears arose that some publishers might close down for total lack of newsprint.

Pressures on capacity

The thrusts of publishing requirements and inventory buildups put heavy pressures on North American newsprint production capacity.

Capacity appeared entirely adequate to meet the buildups and growing U.S. demand, but the two Canadian strikes intensified the already tightened supply picture for some publisher. This meant there would be practically no margin between normal demand and available supply in 1973.

Those publishers with firm delivery contracts, funds for inventory accumulation, and warehousing for inventories, appeared to be adequately supplied to weather the strike-related reduced flow of newsprint. Many smaller publishers or contract printers, operating for a variety of business and production reasons, on limited inventories or without adequately secured supply contracts, found themselves facing shortages of newsprint for publishing at normal or at desired expanded levels. Some publishers found themselves facing imminent, critical shortages requiring some cutbacks of newspaper size or frequency of publication.

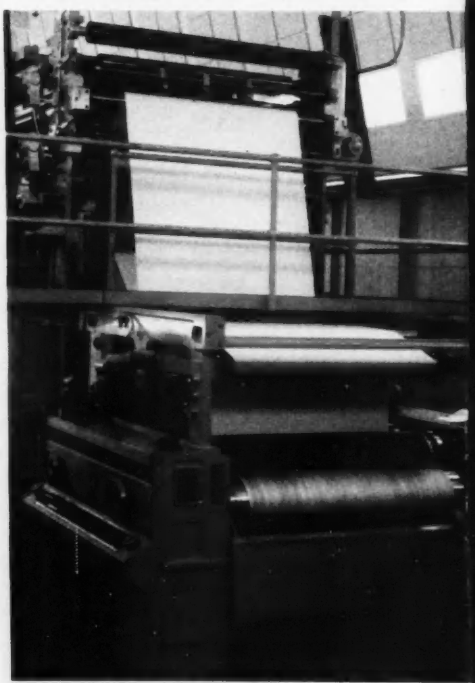
At the same time other publishers expanded operations. By the end of September—midway in the mill strikes—total newsprint consumption by U.S. publishers stood at 8.2 million tons. This was more than 7 percent above consumption during the comparable 1972 period. U.S. newsprint mills, at this point, were operating at close to 94 percent capacity while strike-hampered Canadian mills were at 71 percent operating ratio.

The average production to capacity operating ratios for 1973 were close to 97 percent for U.S. mills and 88 percent for the Canadian mills.

Other factors were added to strike-related newsprint production losses to further complicate the supply situation throughout 1973 and to the present. These included the influence of tightening domestic and world raw materials supply, machinery and equipment availability, and the energy situation. This makes it most difficult to evaluate the capabilities of newsprint producers to meet current and conservative near-term growth projections.

Southern U.S. mills—large consumers of natural gas—began to face worsening supply situations for gas early in the year. Shortages of chlorine and other important chemicals developed and still persist. Severe winter and spring storms, particularly heavy rain in the South, disrupted pulpwood production and deliveries.

Labor shortages in New England and the



NEWSPRINT AVAILABLE — *This newspaper's press is not short of newsprint in 1974. The shortage of 1973 subsided with the resumption of flow of newsprint from Canadian mills to U.S. publishers.*

South further disrupted logging and pulpwood production. The increased demand for fiber and the tight domestic and world pulpwood supply situation redirected demand toward an increased utilization of wastepaper, including waste newspaper. This affected the supply and price of waste newspaper. Wastepaper furnishes about 10 percent of the wood fiber for U.S. newsprint production. Yearend newsprint production figures indicate these supply problems were met without severe impact. Future impact is uncertain.

The basic data on inventories and production for 1973 with consumption up 2 percent for the year and inventories at normal levels, did not indicate a general newsprint shortage. However, some publishers were facing short supply situations primarily because of supply dislocations or distribution problems. These were related to inventory building, transportation factors, warehousing capacity, distance from supplier mills, past business relationships with mills, or with paper merchant suppliers and possibly double ordering as well as to reduce mill shipments.

Through cooperative newsprint conservation and sharing efforts of publishers, their trade asociations, and the assistance of the U.S. and Canadian producers, the newsprint distribution dislocation was eased through the especially difficult October and November period.

Fourth Quarter GNP Tops Earlier Estimate By $3.5 Billion

Gross national product—the market value of the nation's output of goods and services—rose $33 billion or 10.5 percent at an annual rate in the fourth quarter of 1973 to a seasonally adjusted annual rate of $1,337.5 billion, according to revised figures released by Commerce's Bureau of Economic Analysis. In the third quarter, GNP had increased $32.5 billion or 10.6 percent at an annual rate.

The revised GNP estimate is $3.5 billion higher than the preliminary estimate for the fourth quarter issued a month ago. Revised upward were net exports—$4.8 billion, and inventory investment—$2.1 billion. Personal consumption expenditures were revised down $3.8 billion.

Real output (GNP adjusted to exclude price changes) increased at an annual rate of 1.6 percent and prices as measured by the implicit price deflator for GNP rose at an annual rate of 8.8 percent. The preliminary fourth quarter estimates released a month ago showed increases of 1.3 percent for real output and 7.9 percent for the GNP implicit price deflator.

Final sales increased $19.6 billion in the fourth quarter, compared with $32.3 billion in the third. The deceleration occurred in consumer spending, which increased $9.2 billion compared with $20.4 billion in the third quarter, and in residential construction, which fell $5.2 billion following a decline of $0.4 billion in the third quarter.

State and local government purchases increased $6.6 billion, compared with $4.2 billion in the third quarter.

Inventory investment rose from $4.7 billion in the third quarter to $18 billion in the fourth. From the second to the third quarter, inventory accumulation had shown little change.

Disposable after-tax personal income advanced $26.7 billion in the fourth quarter, compared with an increase of $10.7 billion in personal outlays. As a result, personal saving rose $16 billion, and the saving rate (saving as a percentage of disposable personal income) rose from 5.7 percent in the third quarter to 7.3 percent in the fourth.

New Guidebook Outlines Rules, Aids For U.S. Ocean Shippers

A recently-published guidebook provides detailed information on the kinds of export assistance available from the Federal Government and the steamship industry, as well as data on ocean freight rates and federal statutes and regulations which apply to ocean shipping lines.

Published jointly by the Department of Commerce and the Federal Maritime Commission, *Ocean Freight Rate Guidelines for Shippers* updates a previous edition published in 1966.

The 1974 edition has been expanded to include general information on such important elements of the shipping process as documentation, cargo insurance, packing and containerization, in terms that are aimed particularly at new or prospective exporters.

The guidebook is available at 75 cents per copy from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or through any Commerce Department District Office.

American Flag Service To Leningrad Restored

In a follow-up to the U.S.-USSR Maritime Agreement of 1972, American flag shipping services have been extended to the Port of Leningrad. The S.S. Export Champion, scheduled to arrive at Leningrad on or about March 17 with $10 million worth of general cargo, is the first U.S. ship to call at the port since the Second World War.

Under the agreement, the American and Russian flag fleets are each provided with access to one-third of all cargoes which move by sea between the two countries. It also opened 40 ports in each country to each other's fleets.

Robot Diver Spots Fish, Other Ocean Resources

A second generation robot diver that can inspect the seafloor at great depths is expected to aid significantly in locating commercially important stocks of fish and other undersea resources.

Named RUFAS II (for Remote Underwater Fisheries Assessment System), the instrument is towed behind a research ship, and dives on command to look at selected underwater features. Development of RUFAS II was under the sponsorship of two units of the Commerce Department's National Oceanic and Atmospheric Administration—the National Marine Fisheries Service, and the Office of Sea Grant through a grant to Mississippi State University.

RUFAS II is equipped with roving "eyes" that photograph the surrounding area by videotape and 35 mm. film, and continuously televise its observations to the mother ship. The 35 mm. photo system can be activated to record interesting phenomena, then turned off to ignore barren stretches of sandy bottom.

The sophisticated electronic robot ("Looks like a monster waterbug," said one observer) underwent initial sea trials in the Gulf of Mexico near Destin, Fla. Tests demonstrated that RUFAS II can climb at a rate of 2.5 feet per second. It was towed at speeds up to six knots by a cable more than a mile long, to permit dives as deep as 2,400 feet.

One important feature that distinguishes RUFAS II from its predecessor, RUFAS, is an automatic flight control system, installed to obviate the need for continuous manual control of the vehicle.

Four-Page 'Portraits' Give Data On U.S. Jurisdictions

A new series of statistical portraits of each state, the District of Columbia, and Puerto Rico has been published by the Census Bureau.

Each portrait is a concise summary of basic information about the population, housing, and agriculture of the state. The data are from the 1970 and 1960 Censuses of Population and Housing and the 1969 and 1964 Censuses of Agriculture. Designed primarily as teaching aids in schools, the portraits may well have general public appeal.

The summaries include: total population by race and sex with rural and urban breakdowns; population rank and density; growth between census; populations of important cities and metropolitan areas; population age distributions; marital status; foreign stock; family income; poverty; schooling; occupations; housing units; plumbing; housing quality; and farm production.

Copies are available for 10 cents each from the Publications Distribution Section, SESA, Washington, D.C. 20233.

U.S. Home Entertainment Imports, 1971-73

	1971	1972	Percent change 1971-72	1973	Percent change 1972-73
	Quantity (1,000 units)				
Monochrome TV's	4,166	5,056	21.4	4,989	−1.3
Color TV's	1,283	1,319	2.8	1,459	10.6
Auto Radios	3,150	2,924	−7.2	4,459	52.5
Home Type Radios (excluding combinations)	30,988	40,159	29.6	40,907	1.9
Radio/Phono Combinations	1,531	2,213	44.5	2,027	−8.4
Phonographs/Record Players/Turntables	5,376	7,347	36.7	8,235	12.1
Tape Recorders/Players	16,287	21,760	33.6	22,339	2.6
	Value ($1,000)				
Monochrome TV's	$ 208,047	$ 262,066	26.0	$ 269,098	2.7
Color TV's	205,421	234,852	14.3	262,295	11.7
Auto Radios	51,263	53,359	4.1	91,271	71.1
Home Type Radios (excluding combinations)	306,825	404,955	32.0	448,748	10.8
Radio/Phono Combinations	53,616	87,467	63.1	87,656	.2
Phonographs/Record Players/Turntables	62,211	84,548	35.9	98,901	17.0
Tape Recorders/Players	409,353	580,252	41.8	656,539	13.1
Total	$1,296,736	$1,707,499	31.7	$1,914,508	12.1

Source: Bureau of Census

Home Entertainment Imports Slowed In '73; Might Decline During '74

Foreign shipments of home entertainment audio and video products into the domestic U.S. market grew at a considerably slower rate during 1973 and could actually decline this year.

Value of products imported in 1973 totaled $1.9 billion, a $207 million increase over 1972 but a decline of nearly 50 percent from the 1972 import gain of $411 million.

Due to slackening U.S. demand, as well as production adjustments in Japan, the slowdown in imports is expected to continue during 1974, possibly resulting in a net decrease for the year.

Contrary to the overall trend, imports of color television sets last year—the most important product from the standpoint of U.S. industry—registered a sharp increase of 140,000 units, for a total of 1.4 million units, compared to the 1972 gain of 36,000 units. At the same time, however, U.S. production is estimated to have increased by about 1.7 million units.

Auto radios also showed a steep increase, up 53 percent from 2.9 million to 4.5 million units, a marked turnaround from 1972 when unit imports dropped about 7 percent. But unit increases in home-type radios, phonographs/record players/turntables and tape recorders/players were considerably below the import gains posted in 1972.

Tape recorders/players were still the leading import category, with the largest single increase in value, up $76 million to $657 million in 1973. Value increases also occurred in hometype radios, up $44 million; auto radios, up $38 million; and color TVs, up $27 million.

Japan remained the leading source of supply, with imports valued at $1.2 billion, but its share of the U.S. market continued to slip as significant gains were made by Taiwan.

Japan's share of the import market has been declining partly because of the change in international monetary relationships; the opening of color TV assembly operations by Sony in San Diego and Matsushita (Panasonic) in Puerto Rico; and increased shipments to the U.S. from producers in other Asian countries.

The industry in Japan is faced with continuing wage and material price increases, costly pollution control directives, difficulties in locating new plant sites, and quantitative voluntary export controls on color and monochrome TVs and a check price system on shipments of tape recorders to various European nations. Consequently, in 1974 Japan will continue to concentrate on production of market tested, premium type, high profit items, while the high volume, low- and medium-price product lines will be transfered at an accelerated rate to subsidiary operations in Taiwan, Korea and Singapore.

A 1974 forecast of Japan's Ministry of International Trade and Industry (MITI) anticipates a decline in production of 29 percent in monochrome TVs, 15 percent in radios and 5 percent in color TVs. The same forecast, however, states that Japan's exports of resistors, electron tubes and diodes should increase by 39 percent, 25 percent and 15 percent, respectively, reflecting the expanded production capacity of overseas Japanese subsidiaries assembling audio and video products. Japan's imports of inexpensive radios from other Asian countries are expected to quadruple in 1974.

Although MITI's report does not refer to imports of monochrome and color TV sets, there is a strong likelihood that Japan will be importing a substantial number of these products from other Asian sources. Japan may even import a nominal quantity of color TVs from the United States. Based on these considerations, there exists the strong possibility of a substantial decline in U.S. imports of these products from Japan.

U.S. imports from Taiwan are expected to increase, offsetting to a large extent the anticipated decline from Japan. With the advantages of increased output of components used in end-product assembly (the major exception being color TV picture tubes), a growing diversity in product mix, and wage rates still considerably lower than those of Japan. Taiwan's electronic sales probably will continue to show strong gains, with its value share of the total U.S. import market for these items increasing substantially over the 17 percent level of 1973.

Korea is expected to be the fastest growing supplier of audio and video products to the U.S. Under the currently favorable Korean Government policy of resource allocation priorities for the electronics industry, wages lower than Taiwan, and the expanding or planned joint ventures involving such major Japanese manufacturers as Matsushita (Panasonic), Toshiba, Hitachi, Sanyo, and Crown, 1974 imports from

Top Home Entertainment Suppliers

Value ($1,000)

	1971	Percent of total	1972	Percent of total	1973	Percent of total
Japan	$ 986,322	76.1	$1,175,201	68.8	$1,182,118	61.7
Taiwan	105,984	8.2	233,534	13.7	329,469	17.2
Hong Kong	68,434	5.3	99,566	5.8	117,666	6.1
United Kingdom	47,086	3.6	73,587	4.3	75,965	4.0
Korea	5,933	.5	16,492	1.0	58,560	3.1
Singapore	8,087	.6	25,335	1.5	31,298	1.6
Canada	29,581	2.3	26,553	1.6	30,932	1.6
Germany	15,868	1.2	16,022	.9	21,072	1.1
Mexico	19,429	1.5	25,388	1.5	20,790	1.1
Brazil	—	—	825	.1	15,801	.9
Other	10,012	.7	14,996	.8	30,837	1.6
Total	$1,296,736	100%	$1,707,499	100%	$1,914,508	100%

Source: Bureau of Census

Korea—almost exclusively from joint Korean-Japanese ventures—will probably register the highest percentage gains of any foreign supplier.

Imports from other major foreign sources with one-product orientation, the U.K. (record changers/players), Hong Kong and Singapore (home-type radios), Brazil (auto radios) and Mexico (monochrome TVs) will reflect a developing downtrend in U.S. demand. In addition, the U.K., faced with the possibility of a prolonged energy crisis, may not be able to supply even a decreased U.S. demand for record changers/players used in assembly of phonographs and combinations.

(This is one of a series or reports on imports of electronic home entertainment products published quarterly by the Industrial Products Division, Office of Import Programs, Bureau of Resources and Trade Assistance.)

Technical Advisory Board Revived

Fourteen outstanding scientic and technical leaders from industry and the university community have been appointed to serve on the Commerce Technical Advisory Board (CTAB), which has been reestablished by Secretary Dent.

CTAB was formed to study and evaluate the technical activities of the Department of Commerce and to advise on specific technical problems of material significance.

The board is chaired by Dr. Betsy Ancker-Johnson, Assistant Secretary of Commerce for Science and Technology, who is responsible for the activities of the National Bureau of Standards, Patent Office, Office of Telecommunications, National Technical Information Service, Office of Product Standards and Office of Environmental Affairs.

New board members include: William Carey, vice president, Arthur D. Little, Inc.; Dr. Paul F. Chenea, vice president—research labs, General Motors; Dr. Donald W. Collier, vice president — research, Borg-Warner Corp.; Dr. Thomas Fox, professor of chemistry and polymer science, Carnegie Mellon Univ.; Dr. Eugene G. Fubini, Fubini Consultants; Roger H. Gilman, director of planning and development for Port Authority of New York and New Jersey; Dr. Willis W. Harman, director of Stanford University's Center of the Study of Social Policy.

Also: Willie L. Leftwich, attorney, Hudson, Leftwich and Davenport; Dr. Richard Morse, president of MIT Development Foundation; Dr. William J. Pietenpol, consultant; Dr. Malcolm E. Pruitt, vice president and director of research, Dow Chemical; Dr. David V. Ragone, engineering dean, U. of Michigan; Hugh F. Steen, president, El Paso Natural Gas, and Prof. Robert B. Stobaugh, Graduate School of Business Admin., Harvard University.

U.S. Plant, Equipment Spending To Surge Past $100 Billion In '74

American business predicts that plant and equipment spending in 1974 will continue to increase at the high rate that it reached in 1973, and top $100 billion for the first time. The overall rise will probably remain strong through the second half of the year.

A survey made in January and February by Commerce's Bureau of Economic Analysis shows that businessmen expect to spend $112.7 billion for new plant and equipment this year, 13 percent more than in 1973. Capital expenditures increased 12.8 percent in 1973 and 8.9 percent in 1972.

The projected capital spending pattern for the first quarter is expected to be up 3.3 percent to an annual rate of $107.2 billion; second quarter, up 2.6 percent to an annual rate of $110 billion; and second half, up 7.2 percent from the first half and 13.8 percent above the actual expenditures reported for the second half of 1973.

Actual capital outlays in the fourth quarter of 1973 increased 2.8 percent to a seasonally adjusted annual rate of $103.7 billion. The fourth quarter projection reported last December had been for a four percent increase. Actual capital spending totaled $99.74 billion in 1973 compared with $88.44 billion in 1972.

The increase in projected capital spending in 1974 is stronger in manufacturing than in nonmanufacturing, which is about in line with what happened in 1973. Manufacturers anticipate a 19 percent increase in capital spending in 1974 compared with 21 percent in 1973. Nonmanufacturing industries look for a gain of 9 percent compared with 8 percent in 1973.

All major manufacturing industries except the stone-clay-glass group expect investment increases. Durables producers look for a gain of 18 percent and nondurables producers 21 percent. Increases of 25 percent or more are anticipated by the paper, petroleum, primary metal, motor vehicle, and aircraft industries. The food-beverage, chemical, machinery, and "other durable goods" industries expect gains ranging between 12 and 19 percent.

In the nonmanufacturing group, gas utilities anticipate a 29 percent rise in capital spending, electric utilities 17 percent, railroads 21 percent, and mining companies 17 percent. Communications firms expect a substantial increase. Airlines anticipate a curtailment of expenditures again this year, and "other transportation" firms look for a decline.

The greater strength in manufacturers' investment plans for 1974 compared with nonmanufacturing is more pronounced in the first half of the year than in the second. Manufacturers project a 10 percent rise in the first half of the year from the second half of 1973, with durables and nondurables producers contributing about equally to the rise.

Nonmanufacturing firms expect a 4 percent increase in the first half of 1974. In the second half, both manufacturing and nonmanufacturing industry groups anticipate a gain in capital spending of about 7 percent.

The value of new investment projects started by manufacturers during the fourth quarter of 1973 increased 3 percent after seasonal adjustment. Starts by durable goods manufacturers rose 4.5 percent, with primary metal companies reporting sizable increases. Projects started by nondurable goods producers increased 1.5 percent.

The value of new projects begun by manufacturers exceeded their capital expenditures in the fourth quarter of 1973. Consequently, there was an increase in carryover of investment projects, that is, the amount still to be spent on projects already under way.

Investment projects started by public utilities in the last quarter of 1973 totaled $9.7 billion compared with $11.3 billion in the third quarter.

U.S. Median Family Income Seen At $15,500 By 1985

Median family income in the United States would rise to $15,500 by 1985 if the annual rate of increase in average income remains at the 3 percent average rate of the past 20 years.

Median family income in 1972, the most recent year for which data are available, was $11,120, or 8.1 percent above the 1971 figure. In real or constant dollars, the 1972 median was 4.6 percent above 1971; the rest of the 1971-72 increase was due to inflation.

The 1985 figure is one of a set of projections concerning income distributions calculated by Census Bureau statisticians for the first time. The projections are in terms of constant 1971 dollars—that is, they hold the purchasing power of the dollar constant over the projection period.

The report shows projected income distribution for U.S. families and unrelated individuals in 1975, 1980, 1985, and 1990. For each year, separate projections are shown for assumed income growth rates of 2.0; 2.5; 3.0; 3.5; 4.0; and 4.5 percent annually.

Single copies of the *Illustrative Projections of Money Income Size Distribution for Families and Unrelated Individuals*, Series P-23, No. 47, are available for $1.20 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or from Commerce Department District Office.

Industrial Growth Of 'New Town' Gets $14 Million Boost

Industrial development, the first priority of a "new town" being created to stem outmigration from the rural southland, got a $14 million boost this month from an agreement between the Department of Housing and Urban Development and a New York investment banker.

The arrangement provides Soul City, North Carolina, a five-year-old project of Floyd B. McKissick, with $14 million in development funds.

McKissick, attorney and former civil rights leader, conceived the city as a means of reversing outmigration of poor minorities to urban areas and enhancing the lives of individuals who previously might have lost hope in their ability to achieve. Commerce's Office of Minority Business Enterprise (OMBE) nurtured this conception by funding a regional planning arm of Soul City in 1972.

The multiracial community is projected to have 24,000 jobs and a population of 50,000 by the year 2004, according to its planners.

Salomon Brothers, the investment banking concern which entered the agreement with HUD, will act as an agent in arranging the private placement of the debt through bond issuance with HUD-guaranteed debenture.

To date, $5 million in bonds have been placed with the remaining $9 million to follow at a future date.

Samuel J. Cornelius, deputy director of OMBE, said the arrangement moves the project closer to its goal of creating a healthy, ongoing economic base for the new city, which had a November 1973 groundbreaking. Cornelius and HUD Assistant Secretary Alberto F. Trevino, Jr. announced the agreement at a press conference in New York.

Cornelius noted that OMBE has assisted the Soul City project with the funding of the Warren Regional Planning Corp., an arm of the Soul City operation. In 1972, OMBE awarded $531,000 in funds for the area, and to mobilize the legal, financial, and engineering materials needed for the project.

"I'm particularly proud that OMBE has participated in Mr. McKissick's Soul City plan," Cornelius said, "and now that this plan has become a reality, OMBE is happy to join with HUD and other federal and private agencies in this milestone achievement."

He said that OMBE is currently considering refunding the Soul City venture with $333,140 to assist in further developmental efforts.

Soul City will occupy a tract near the community of Manson in Warren County, N.C. Warren County is part of the Kerr-Tar region, an hour away from the major population concentrations of Raleigh and Durham.

The city's developers believe that its location near Interstate Highways 85 and 95 and the Seaboard Coastline Railways, which runs through the industrial park, will be an advantage. These, combined with the trend of manufacturers to locate in small towns and communities to reduce expenses, give Soul City a great potential for development as an industrial urban center.

The continued national demand for products manufactured in the region—textiles, apparel, wood furniture components, and processed agricultural products—make the industrial outlook positive.

"We might not be primarily a Utopia," says McKissick, "but we do have a concept at Soul City that can be a prime means to revitalize blighted rural areas and stem migration to the large urban areas."

OMBE, established in 1969 in the Commerce Department, coordinates federal and private activities aimed at minority business development.

Marketing Specialists Plan To Work On Minority Products, Sales Methods

"But will it sell?"

That's the question Office of Minority Business Enterprise marketing specialists hope to be able to answer about the products of minority firms. OMBE has asked for $2.5 million during fiscal 1975 in an effort to boost market skills of minority businesses.

"Until recently the emphasis has been on the number of minority businesses started or assisted," says OMBE Director Alex Armendaris. "Today, we realize that the emphasis must be on the quality and viability of minority businesses.

"The key word for minority enterprise this coming year is 'profit,' and one of the keys to profit is effective marketing," says Armendaris.

The requested $2.5 million would be used to determine the market potential for products and services of minority firms, and to develop marketing techniques. Plans call for the addition of 13 marketing staff members to the Washington, D.C. OMBE headquarters office. Marketing specialists also will work with the new marketing effort in each of OMBE's six regional offices.

"The program will concentrate not only on providing market feasibility studies for new businesses, but on developing marketing expertise for existing minority enterprises in order to make them more profitable," Armendaris points out.

The program is expected to relate closely to the efforts of the National Minority Purchasing Council. It is estimated that American corporations buy $350 billion each year from subcontracting firms.

Census Bureau Turns Attention To Farms

It's Census time again! This year the Census Bureau's relentless tabulators will be assembling data on every aspect of the nation's agricultural sector.

Items covered in the Census of Agriculture, which is taken every five years, will include value of all farm products sold, recreation income, number of automobiles, trucks, tractors and combines.

Expenditure questions include purchase of feed, fertilizer, pesticides, lime, gasoline and other farm fuels, machine hire, farm labor, and livestock and poultry purchases.

Like the 1969 census, this will be a mail census. Farmers will be mailed their report forms and asked to return them fully completed.

California Scrap Exporter Fined For Excess Shipment

Imperial Enterprises Co. of Cypress, Calif., an iron and steel scrap exporter, has been fined $500 for violation of the Export Administration Act.

The U.S. Department of Commerce announced that the violation resulted from the unauthorized export to a consignee in Taiwan of an excess quantity of iron and steel scrap.

The company did not contest the charge and consented to imposition of the penalty, which has been paid.

Private Merchant Fleet Numbers 573 Vessels, 13.3 Million Tons

The Merchant Marine Data Sheet issued by Commerce's Maritime Administration shows that on Feb. 1 the active privately-owned sector of the U.S. merchant marine consisted of 574 vessels comprising 13.2 million deadweight tons.

At that time, the active fleet consisted of 176 freighters, 234 tankers, 24 bulk carriers, 134 intermodal ships, and six combination passenger-cargo ships.

As of Feb. 1, 85 merchant ships totaling more than 5.8 million deadweight tons were under construction or on order from American shipyards. Valued at more than $3.4 billion, the shipbuilding orderbook includes 64 tankers, 12 intermodal carriers, seven dry bulk carriers and two special-type vessels.

WHERE IT'S AT—*Dallas' brand new Convention Hall will host the Food and Dairy Expo.*

U.S. Food And Dairy Industry To Strut Its Stuff In Dallas

Food and Dairy Expo, a major biennial exposition of food industry equipment, supplies and services, will be held Oct. 20-24 at the new Convention Hall in Dallas, Texas.

The exhibition, which will occupy both levels of the recently completed hall, will feature an array of equipment, systems and supplies for heating, cooling, freezing, casing, packaging, blending, flavoring, merchandising, displaying, cleaning, sanitizing, storing, conveying, and transporting. About 300 exhibits are expected.

The Dairy and Food Industries Association, which is sponsoring the show, offers the event as a means of reaching customers at a time of restricted sales trips, when many territories are unreachable on a day-to-day basis due to the energy shortage.

Registration is free to anyone with an interest in food processing. The general public is not admitted.

The show attracts officials from the bakery, beverage, brewing, canning, confectionery, dairy, frozen food, meat and related industries.

A Food Engineering Forum, which is a technical session devoted to presentation of scientific and technical papers, will be held in conjunction with the exposition.

The sponsors are developing an extensive overseas promotion campaign to boost foreign attendance at the event. The United States Travel Service, an agency of the Department of Commerce, will prepare travel plans for show visitors, including pre- and post-show visits to plants and facilities in their area of interest. The exposition has also been designated as a VIP (Visit, Investigate, Purchase) event for foreign visitors, which qualifies it for further Commerce Department services. Other features will include an international registration desk and lounge, availability of translators, and trade and financial counselors on hand for on-the-spot assistance.

About 500 visitors from 40 countries are expected. The biggest representation will probably be from neighboring Mexico, and special invitations will be extended to the countries of Eastern Europe, Latin America and Western Europe.

For more information on exhibiting or attending, contact Fred J. Greiner, executive vice president, Dairy and Food Industries Supply Assn., 5530 Wisconsin Ave., Washington, D.C. 20015 (301-652-4420).

NYU Offers Series Of Twelve Industry Packaging Seminars

A series of three-day seminars on twelve different facets of the packaging industry is being offered by New York University's School of Continuing Education. Topics and dates of the seminars, which will be held in the Roosevelt Hotel, include:

Fundamentals of packaging—Sept. 9-11, Nov. 19-21

Materials and techniques of packaging—Sept. 30-Oct. 2, Dec. 2-4

The packaging department—March 26-28, Oct. 1-3, Dec. 16-18

Packaging decoration processes—April 2-4, Oct. 7-9

Packaging machinery & equipment — March 19-21, June 18-20, Sept. 10-12, Dec. 9-11

Packaging adequacy for physical distribution—March 19-21, June 25-27, Nov. 12-14

Economics of packaging—June 4-6, Oct. 22-24

Food packaging technology — May 14-16, Oct. 14-16

Food packaging marketing — May 21-23, Oct. 21-23.

Health and beauty aid packaging—May 7-9, Oct. 8-10

Leisure time packaging—May 13-15, Oct. 15-17

Introduction to plastics packages — June 11-13, Oct. 29-31

Write: SCENYU, New York Management Center, 600 Third Ave., New York, N.Y. 10016.

Calendar For Businessmen

March 21 — Seattle — Economic Census users' conference, Washington Plaza Hotel, 8:30 a.m.-4 p.m.

March 21-22—Miami Beach—Financing Area Development conference, Americana Hotel. Sponsor: National Area Development Institute. Contact Robert Child, NADI, P.O. Box 11890, Lexington, Ky. 40511.

March 22 — Sun Valley, Idaho — Pacific Northwest Regional Comm. meeting. For details, call 202-254-7030.

March 29-31—Durham, N.H.—Northeast Industrial Development Assn. advanced seminar, U. of New Hampshire. Contact Robert L. Kiley, Salisbury-Wicomico Development Corp., Salisbury, Md. 21801 (301-749-1251).

March 30-31 — Wenatchee, Wash. — State symposium on recreation trails. Contact Leonard Askham, Cooperative Extension Service, Washington State U., Pullman 99163 (509-335-2511).

April 3-4—Chicago—First National Health and Welfare Management Systems Conference (midwestern session), Sheraton-Chicago Hotel. Sponsor: NYU School of Continuing Education, 800 Third Ave., New York, N.Y. 10016 (212-687-8540 or 212-889-3773).

April 4-5—Clifton, Ga.—Rural industrialization conference sponsored by U.S. Dept. of Agriculture. Contact Dr. R. J. Mikes, P.O. Box 1209, Clifton, Ga. 31794.

April 7-12—Chico, Calif.—Basic industrial development course, California State U. Contact American Industrial Development Council, Kansas City, Mo. (816-474-4558).

April 9 — Chicago — National materials shortage briefing. Featured speaker: Secretary of Interior Rogers Morton. Sponsors: Illinois State Chamber of Commerce, Commerce District Office.

April 14-19—Atlanta—Basic industrial development course, Georgia Institute of Technology. Contact Robert B. Cassell, Industrial Development Div., Georgia Tech, Engineering Experiment Station, Atlanta, Ga. 30332 (404-894-3843).

April 29-May 1—Cincinnati—Workshop on Corporate Facilities—an Exchange of Experiences and Ideas, Stouffer's Cincinnati Inn.

Sizable Education Expansion In Nigeria, Zambia Spurs Training Equipment Market

The magnitude of educational expansion and the determination of Africans to train their population impressed members of Commerce's Training Systems and Equipment Trade Mission, recently returned from Nigeria and Zambia.

Trade mission members learned that:

► Spending for education stands high among government priorities.

► The business sector is rapidly increasing its in-house training capabilities to replace foreign skilled and professional employees with Africans.

► African officials and businessmen are most receptive and open minded to innovative techniques.

► The techniques, systems, and equipment represented by the mission members have an immediate application to training needs in the African private and public sector.

Thirty-eight African countries have reached nationhood in less than one generation, bringing rising economic expectations and a new impetus for economic development. Inherent in these requirements is the effective utilization of human resources. In emerging nations, the need for educational development and skills training is significantly recognized in African budgets and plans.

Funds available

The training systems trade mission was initiated on such evidence of large-scale expenditures for development in education and the availability of ample funds. A review by Commerce of the development plans for Nigeria and Zambia indicated that the two countries are likely to spend a total of about $100 million annually on new investment in the educational sector. Both countries can afford these large sums. Nigeria has a strong economy based on its large petroleum exports. Copper is the keystone of Zambia's economy and, at the current high level of copper prices and with increasing copper production, Zambia is in a good foreign exchange position.

In a tightly scheduled, business-packed 11 days, the 11-member mission visited Lagos and Kaduna in Nigeria and Kitwe and Lusaka in Zambia. The eight firms represented by these men offered a wide range of U.S. products and services, and as a group they talked to several hundred potential customers.

Thorough briefings by U.S. Embassy personnel, highlighting market potential and details on how to do business, were given to the mission members in both Nigeria and Zambia. In Lusaka, for example, the briefing included workable, down-to-earth tips on freight routing into Zambia.

Interest was high in the possibility of applying U.S. techniques in an African context. C. Ray Simmons of Data Design Labs characterized it as "a great opportunity in training systems development." Data Design produces multimedia training and personnel testing techniques for a broad spectrum of clients.

New to market

All mission members were new to the African market and agreed that the mission was a valuable introduction. Several used their presence in Africa to visit other countries and score additional sales. Most members planned early returns to Africa and one has already gone back to follow-up on his substantial prospects for business agreements.

Mission participant D. R. Dragstrem, president of Dragstrem Inc., in evaluating the group's visit, commented: "The mission has paid off in potential sales about ten times over my own efforts in time and money in development of new markets."

Working jointly, the Commerce Department and the U.S. Foreign Service posts identified prospective customers for the mission members. Financial reports on prospective distributors, agents, or customers were available. In addition, group presentations were arranged for audiences of interested Africans—for example, a presentation was made to the Nigerian Counsel for Management Education and Training in Lagos. A number of useful contacts were

MEETING IN LAGOS—*Judith S. Chadwick, Mission Director, and S. G. Odia, Director of Nigerian Center for Management Development, open presentation at Center headquarters.*

developed as a result, and in several instances transactions were concluded with local businessmen who were met in this context.

The mission was headed by the first woman to lead a Commerce Department trade mission to Africa, Ms. Judith S. Chadwick, Deputy Assistant Secretary of Commerce for Administrative Management. Ms. Chadwick was interviewed in prime time on the national television networks of each country. These interviews focused national attention on the objectives of the trade mission.

Ralph L. McCreary, vice president of Hoffman Electronics Corp. and a member of the mission, described his reaction to the business potential by saying: "Prospects and requirements are good." McCreary's firm is a developer of audio-visual educational and training programs. African educators and businessmen and government officials were interested in the firm's motivational developmental reading and math programs and in its vocational training program.

Substantial results

Three sales representative agreements were signed during the mission and 11 are forecast to be signed in 1974. In addition, seven joint venture and two licensing agreements are now in the mill. Robert C. Fraser of Technicolor, Inc., displayed his firm's audio-visual equipment, particularly film projectors. Fraser said that he met with a "good reception, with sales to industry and government expected in 1974."

Mission members brought back nearly $100,000 worth of signed orders and expect sales of almost $10 million during 1974 as a result of their participation in this trade mission. Abdul El-Wailli of the Sound Equipment Distributing Co., one of the members who made on-the-spot sales, said, "I'm looking forward to doing more business in the near future." SEDCO distributes audio, communications, and electronic equipment.

In addition to those already mentioned, a variety of other U.S. products and services were ably represented. Ulysses Rowell and Philip Gayton of University Information Systems offered multimedia courses for businessmen in accounting, marketing, advertising, personnel management, and other technical training. Hamilton Wyche of International Trade Commission, Inc., represented a wide range of educational supplies and equipment, school furniture, administrative office equipment, early childhood training equipment, and audio-visual programs. The telecommunications management consulting firm of Dittberner Associates, Inc., was represented by Donald L. Dittberner, the firm's president. James T. Doyle, Deputy Regional Marketing Director for Africa in the Department of Commerce, accompanied the mission as Deputy Director.

ALSO AT CENTER — *Describing his firm's training equipment to Nigerian audience at Development Center is mission member Abdul El-Wailli. Waiting their turns, in addition to Ms. Chadwick (far left), are members Ralph L. McCreary and C. Ray Simmons. On El-Wailli's right is U.S. Commercial Attache George Hays.*

Farm Machinery Mission Gains Business Prospects In Africa

U.S. executives recently gained excellent new business prospects in Africa for sales of their farm machinery and services. They ventured into the Ivory Coast, Nigeria, and Zambia, where these market advantages are apparent:

The Ivory Coast is taking a look at its traditional buying patterns; currency fluctuations and growing autonomy of local firms both contribute to a consideration of new sources. Nigeria's record export earnings from its petroleum sector are to be pumped into agribusiness, industry, and infrastructure. Zambia's export earnings from higher copper prices are also at record levels, and agricultural development is expected to receive increasing attention.

The U.S. businessmen comprised a Commerce Department trade mission. Companies represented are suppliers of tillage tools, lumber and sawmill machinery, electrical motors for irrigation pumps, fertilizer spreaders, sprayers, and other agricultural and irrigation equipment.

After visits in Abidjan, Lagos, Kaduna, and Lusaka, the participants project their sales to the area in the next 12 months at more than $9 million. One member is returning to Nigeria; others said that they would be returning to the several countries within the next 6 to 12 months. One company signed a distributor; seven other such agreements are expected to be concluded before long.

New sources for Ivorians

The president of the chamber of commerce in Abidjan, the director of the Banque Ivoirienne de Developpement Industriel, and officials of the Ministries of Plan and of Agriculture were among those whom the mission members met in the Ivory Coast. According to Mission Director Jesse N. Durden of the Des Moines Commerce District Office, the country is looking toward agricultural development and diversification. Productivity is being encouraged by guaranteeing farmers a higher price for their products. As the country was formerly a French colony, most agents are French, Durden points out. Ivorians now wish to buy products other than those pro-

duced in France, and traditional French-oriented local agents are switching to distribution of more U.S. products.

As the Ivory Coast would like to export finished products as well as raw materials, it is interested in establishing factories in the country close to its raw materials. Its main agricultural exports—timber, coffee, and cocoa—do not require tillage tools; thus, it will be several years before there is a significant market for such items or for tractor parts. A market does exist for irrigation pumps, says mission member William C. Napper of Borg-Warner.

Mechanization in Nigeria

In Lagos, the U.S. businessmen were received by the Nigerian Chamber of Commerce. Mission member Frank Taylor of FMC met with the Federal Commissioner of Agriculture and Natural Resources. The Commissioner told Taylor: "The full development of the Nigerian agriculture cannot be achieved through the use of manual means alone. Some degree of mechanization will be essential." He added that agricultural machinery has not been giving the farmer maximum service because of poor servicing organizations and lack of parts.

In Kaduna, mission director Durden met with officials of the Ministry of Trade and Industry Cooperatives and the Ministry of Agriculture and Natural Resources. The potential for farm equipment sales in the north will increase as the multiplier effect of successive droughts points to the need for modernizing production methods.

Nigeria, with a current annual growth rate expected to exceed 12 percent, gives high priority to agriculture and welcomes investment and cooperation from the United States—particularly agricultural technical assistance. The country has a revenue sharing program under which money from the oil industry is distributed to its 12 states. The United States now imports about one-third of the Nigerian oil production, providing increasing foreign exchange for purchases of U.S. equipment.

Development in Zambia

In Lusaka, mission members met, among others, the Minister of Commerce, the Minister of Rural Development, the Under Secretary for Planning, the Deputy Director of Agriculture, agricultural and irrigation engineers, and the Executive Director of the Commercial Farmers Bureau — the latter group planning a trade mission to the United States in May or June. Some of the members toured the Bonanza Tobacco Farm, owned and managed by the chairman of the Zambia Virginia Tobacco Association.

The Minister of Rural Development is preparing intensive development zones to build up Zambian participation in rural production, according to Durden. The majority of farmers are in subsistence farming. Seventy-five percent of agriculture is carried on by women; some commercial farms, however, have complete, modern machinery—planters, plows, and combines.

IN IVORY COAST — *Mission members William Napper (left) and Alex Himmelberg (second from left, front) visit Brosette Afrique, supplier specializing in irrigation.*

Agricultural equipment may be entered duty free. An import license can be obtained, but Zambians will not purchase from a U.S. firm that distributes from South Africa. Zambians want U.S. products, and over the next five years, says Durden, "there could be $100 million in new business for American suppliers willing to take the time and effort to promote their products."

In addition to those already mentioned, mission members were: Melvin A. Dove, Jr., Gandy Co., Owatonna, Minn.; Mrs. Charlotte Garfield, D. B. Smith Export Corp., Utica, N.Y.; Claude Garnier, Abidjan, and Allan Pitt-Pladdy, Nairobi (Kenya), International Harvester Export Co.; L. A. Himmelberg, Emerson Electric Co., Milford, Conn.; and George E. Lamb, Enterprises International, Hoquiam, Wash.

Note: A report on current economic trends in Nigeria is on Page 31.

VIEWING OPERATIONS — *Also in Ivory Coast, mission member Melvin Dove (left) visits an experimental plantation of Soprodav (State company for production of avocados) and talks with Director Pierre Sepe Zadi.*

U.S. Share Of World Exports Of Manufactures Stabilizes

The U.S. share of world exports of manufactures was virtually unchanged during July-September 1973. After increasing substantially in the first two quarters, this country's standing improved only marginally to 21.8 percent, based on U.S. dollars reflecting constant (first quarter 1971) exchange rates.

U.S. exports of manufactures advanced by 6 percent to a seasonally adjusted total of $11.6 billion in the third quarter as demand continued strong for most products in foreign markets. While this growth represented a slowdown from the 9 percent rate recorded in both the March and June quarters, it was, nevertheless, moderately greater than the 5.4 percent gain posted by this country's 13 leading competitors in sales to markets other than the United States.

When world trade is measured in U.S. dollars reflecting the exchange rates prevailing during each period, export values are higher due to the appreciation of most key currencies relative to the dollar. By this yardstick, sales of other 13 leading suppliers climbed by 12.3 percent, more than double the growth of U.S. exports. As a result, this country's position deteriorated by eight-tenths of a point to 17.4 percent. Except where otherwise noted, the analysis in the remainder of this article is based on U.S. dollars reflecting constant rates of exchange. In this manner, the distortions resulting from the conversion of other countries' trade data into U.S. dollars at the fluctuating rates of the past several years is avoided.

The overall U.S. standing in the third quarter was adversely influenced by a particularly weak performance in transport equipment. In each of the four remaining categories of manufactures, however, the United States either maintained or improved its position.

Nonelectric machinery gains

U.S. firms recorded their strongest export gain in nonelectric machinery. Sales expanded by more than one-tenth, twice as fast as those of other suppliers. As a result, the U.S. share rose to 29 percent, its highest level in three years. Leading the export advance in nonelectric machinery were increased shipments of power generating machinery, especially aircraft engines, as well as electronic computers and parts. Sales of metalworking machine tools, particularly to Brazil and the USSR were also buoyant, as were those of heating and cooling equipment.

In "other manufactures", a diverse group encompassing mainly semifinished goods and consumer nondurables, the United States continued to strengthen its position although the gain was substantially less than in the preceding three months. The more modest rise in share to 14.5 percent was attributable in part to the leveling off in steel deliveries following a steep advance in the second quarter. Textile yarn and fabric sales again climbed strongly, however, and sizable increases were scored in shipments of copper to Brazil, platinum to Japan, and silver to the Netherlands. Exports of scientific instruments expanded notably.

Another small improvement was recorded in the U.S. standing in the market for electric machinery. Exports moved up slightly more rapidly than in the previous quarter and this country's position reached 24.7 percent. Higher deliveries of tubes, transistors, semiconductors, and their parts contributed most to the overall rise but those of measuring and controlling instruments advanced as well. Offsetting a portion of these increases was the decline in sales of electric power generating equipment.

The U.S. share of the chemicals market held virtually even with its level of the previous quarter at 21.5 percent, although shipments of most products in this group remained buoyant. Exports of organics increased considerably as did those of special nuclear materials, particularly to Germany and Japan. Deliveries of manufactured fertilizers and plastics and resins posted substantial gains.

In the transport equipment market, the U.S. standing slipped by more than one and one-half points to 28.2 percent as shipments fell 3 percent below the second quarter level. This sluggishness was largely attributable to lower shipments of military aircraft and of cars, trucks, and automotive parts to Canada. On the other hand, exports of automotive products to countries other than Canada rose notably, while deliveries of civilian aircraft, boosted by larger sales to Japan, Australia, and Switzerland, also recorded steep gains.

Italian share improves

For the second consecutive quarter, Italy posted the most substantial share gain among this country's five leading competitors in shipments to markets outside the United States. Japan and the United Kingdom recorded small increases and Germany a sizable loss. Share data based on prevailing rather than constant exchange rates indicate a different pattern, however, depending on the relative appreciation or depreciation of the various currencies during the third quarter of 1973. On this basis,

U.S. SHARE OF WORLD EXPORTS OF MANUFACTURES

Adjusted for seasonal variation

Commodity	U.S. exports (million dollars)	U.S. share of world exports to foreign markets[1] (%based on current rates of exchange[2])	(% based on constant rates of exchange[2])
Manufactures, total			
1972 1st qtr.	8,250	18.8	20.5
2nd	8,159	18.0	19.7
3rd	8,685	19.2	20.9
4th	9,203	18.6	20.2
1973 1st	10,081	18.7	21.1
2nd	10,961	18.2	21.7
3rd	11,614	17.4	21.8
Chemicals			
1972 1st qtr.	1,047	19.0	20.7
2nd	952	17.0	18.6
3rd	1,014	18.2	19.8
4th	1,157	18.7	20.3
1973 1st	1,233	18.0	20.4
2nd	1,351	17.9	21.4
3rd	1,480	17.0	21.5
Nonelectric machinery			
1972 1st qtr.	2,334	24.9	26.9
2nd	2,305	24.2	26.2
3rd	2,435	25.6	27.6
4th	2,567	24.6	26.4
1973 1st	2,733	24.8	27.6
2nd	2,900	23.9	27.9
3rd	3,198	23.5	29.0
Electric machinery			
1972 1st qtr.	900	20.9	22.8
2nd	881	20.0	21.8
3rd	946	20.9	22.8
4th	1,013	20.8	22.6
1973 1st	1,148	21.6	24.3
2nd	1,220	20.7	24.5
3rd	1,319	19.8	24.7
Transport equipment			
1972 1st qtr.	1,985	26.3	28.5
2nd	1,995	25.0	27.2
3rd	2,154	27.0	29.2
4th	2,217	25.0	26.9
1973 1st	2,524	26.9	30.1
2nd	2,663	25.4	29.8
3rd	2,584	22.9	28.2
Other manufactures			
1972 1st qtr.	1,984	11.6	12.7
2nd	2,026	11.4	12.6
3rd	2,136	12.2	13.3
4th	2,249	11.8	12.9
1973 1st	2,443	11.4	13.0
2nd	2,827	11.8	14.1
3rd	3,033	11.4	14.5

Note: First quarter 1972 U.S. exports and U.S. percentage shares were inflated because of strike-delayed shipments. The term "manufactures" refers to chemicals, machinery, transport equipment, and other manufactures except mineral fuel products, processed food, fats, oils, firearms of war, and ammunition. U.S. data have not yet been revised to reflect recently-released seasonal adjustment factors.

[1] World exports are defined as exports from the 15 major industrial countries. Percentage shares are based on values excluding shipments to the U.S. These nations, which account for 80 percent of world exports of manufactures to foreign markets, are: United States, Austria, Belgium-Luxembourg, Canada, Denmark, France, Fed. Rep. of Germany, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom, and Japan.

[2] Two series of U.S. percentage shares are shown. The first column shows shares based on current rates, the official rates of exchange for merchandise shipped during each period. The second column shows shares based on data measured at constant rates of the first quarter 1971, prior to widespread currency changes.

the German standing improved strongly, Italy's gain was cut in half, Japan's share held even, and Britain's position declined.

Italy's share of the manufactures market climbed significantly to 8.2 percent although the rise was less than in the previous quarter. Gains were realized in all five groups of manufactures, but were especially strong in electric machinery, transport equipment, and chemicals.

The standings of Japan and the United Kingdom expanded to 9.3 percent and 10.7 percent, respectively. While the Japanese increase reflected stronger performances in all groups, the largest advances were in electric machinery and transport equipment. The latter also contributed to the British gain, combining with a rise in "other manufactures" to more than offset reductions in nonelectric machinery and chemicals.

France posted a small drop in its position to 9.3 percent as losses extended to all groups except transport equipment. The largest decline, more than half a point, occurred in electric machinery.

The German share again deteriorated, falling by half a point to 18.7 percent. Sharp losses in both machinery categories and a smaller, but still substantial, decline in "other manufactures" were the main contributing factors. Only in chemicals did Germany enhance its standing.

OFFICE MACHINERY ON DISPLAY — *A series of "mini-exhibitions" of U.S. products in the Commercial Library of the American Embassy at Santo Domingo, Dominican Republic, was inaugurated last month by Ambassador Robert A. Hurwitch (right). The featured Burroughs electronic desk calculators are being explained by Frank Harper, general manager of the Dato Centro firm that represents the U.S. producer.*

U.S. Firms May Participate In Dermatology Congress, Brazil

The Third World Congress of the International Society of Tropical Dermatology will be held Sept. 1-5 at the convention center of Anhembi Park, Sao Paulo, Brazil.

A specialized exhibition will be held, showing pharmaceutical products and medical equipment related to dermatology treatment. Companies interested in participating may obtain information from Prof. Sebastiao Sampaio, Alcantara Machado Congressos, Palacio Das Convenções, Parque Anhembi, Caixa Postal 02012, Sao Paulo, Brazil.

Laboratory Exhibition In Prague Invites Firms

Czechoslovakia is sponsoring an international exhibition of laboratory equipment, chemicals and literature under the title "PHOSPHOROUS '74," to be held in Prague Sept. 10-14.

The exhibition, being planned in conjunction with the Second Symposium on Inorganic Phosphorous Compounds, will be devoted to the following categories of products and equipment: chemicals for research work and for analytical chemistry in the field of phorphorous chemistry, all types of phosphorous compounds, new studies from specialized chemical literature, monographs and textbooks, spectroscopic instruments, nuclear and electron-magnetic resonance and chromatographic equipment, technological equipment used in the production of phosphorous compounds and products, and laboratory equipment in general.

Applicants may write: Management, PHOSPHOROUS '74, "Made in Publicity," Opletalova 5, 1114 Praha 1, Czechoslovakia. Or, for further information, contact Paul Terlizzi of Commerce Department on 202-967-5163.

Venezuela To Hold 'First World Festival Of Rum' In Caracas

The "First World Festival of Rum," sponsored by private promoters with Venezuelan government support, is scheduled for Nov. 15-24 in Caracas. Distillers from Latin America and the Caribbean, and manufacturers of distillery equipment, bottle manufacturers, label printers, packaging material suppliers and other supporting enterprises will exhibit.

Though there is no official U.S. Government participation, this exhibition provides an unusual opportunity for U.S. manufacturers to display their products to a worldwide audience. For further information and participation applications, write: Antonio Ramos, Coordinator General, Feria Mundial del Ron, Apartado 60.588, Caracas, Venezuela.

Taipei Has Trade, Investment Seminar Timed For AMPRO Show

The International Management Association, affiliate of the American Management Associations, has scheduled a trade and investment seminar for Taipei March 27-29.

Organized in cooperation with the Republic of China's Ministry of Economic Affairs and the China Productivity Center, the three-day briefing in the Grand Hotel is timed to enable participants to visit AMPRO '74, the major exhibition of U.S. products sponsored by the ROC Board of Foreign Trade in cooperation with the U.S. Department of Commerce, from March 25 to 31.

U.S. firms interested in additional information should contact Mohammad Z. Khaiser, Vice President, International Management Association, 135 West 50th St., New York, N.Y. 10020, 212-586-8100.

Exim-Backed Exports on Rise

The Export-Import Bank authorized $4.9 billion in loans, guarantees and insurance, supporting U.S. export sales of nearly $7.1 billion in the eight-month period through February. This represents an increase of 34.2 percent in supported exports over the previous year's corresponding period. Among the authorizations were 192 new direct loans totaling $1.813 billion.

Washington's Official Trade Briefs

This article is another in a series of reports outlining actions by domestic, foreign, or international agencies affecting world trade, as compiled by the Legislative and Tariff Policy Division of the International Economic Policy and Research Staff's Office of International Trade Policy.

The Congress

Committee Hearings: The Senate Finance Committee began hearings March 4 on H.R. 10710, the proposed Trade Reform Act, with testimony from Administration witnesses. Secretary of the Treasury George P. Shultz, Special Representative for Trade Negotiations William D. Eberle, and Peter M. Flanigan, Executive Director of the Council on International Economic Policy, were the opening witnesses. Secretary of Commerce Frederick B. Dent, Secretary of Labor Peter J. Brennan, Secretary of Agriculture Earl L. Butz, and Secretary of State Henry A. Kissinger completed the Administration testimony in support of the bill. Testimony from public witnesses was scheduled to follow.

On March 4, the Committee on Ways and Means held a public hearing on H.R. 11251, to amend the Tariff Schedules of the United States to provide for the duty-free entry of methanol imported for use as fuel.

Votes: On Feb. 26, the Senate by a 56 to 35 vote extended the authority of the Overseas Private Investment Corporation to Dec. 31, 1976. The new bill charges OPIC with the responsibility for continuing its efforts to increase participation by private insurers in the program, and to assume a role as reinsurer of the private participants.

New Legislation: Since the opening of the 93rd Congress, some 538 trade and related bills have been introduced. Legislation not previously reported in the Trade Briefs column includes S. 2947, to amend the Export Administration Act of 1969 to authorize imposition of export controls when necessary to bring about adjustments in economic policies or actions by foreign governments; H.R. 12577, to prohibit export of raw steel and semi-processed steel until the President determines that a shortage of such items no longer exists; H.R. 12643, to require filing of domestic food price impact statement in connection with exports of U.S. commodities; H.R. 12792 to prohibit export of fertilizer from the United States until the Secretary of Agriculture determines that an adequate domestic supply of fertilizer exists; H.R. 13034, to prohibit for a temporary period the export of ferrous scrap, and for other purposes; H.R. 13115, to amend the Export Administration Act of 1969 to provide for regulation of the export of agricultural commodities; and H.R. 13180, to provide for wheat export marketing stamps to regulate the price of wheat in order to stabilize food prices and to establish the National Wheat Council.

Tariff Commission

Adjustment Assistance — Workers: The Tariff Commission found that certain workers of the Eaton Corp., Detroit (**automotive springs, clutch discs, and rear deck lid torsion bars**) and workers of the Globe Corp., Cincinnati (**men's suits, coats, and trousers**) do not meet the requirements of the Trade Expansion Act of 1962 for applying to the Department of Labor for adjustment assistance.

Investigations — Firms: The Commission has opened three new investigations into the effect of imports on three firms under section 301(c)(2) of the TEA of 1962. Firms which have petitioned the Commission are Roto-Broil Corp. of America, Newark, N.J. (**electric can openers and hair dryers**); Nina Footwear Co., Inc., Long Island City, N.Y. (**footwear for women**); and Sbicca of California, South El Monte, Calif. (**footwear for women**).

Investigations—Workers: On the basis of petitions filed under section 301(c)(2) of the TEA of 1962, the Commission has opened four new investigations on the effects of imports on former workers of the Wall-Streeter Shoe Co., North Adams, Mass. (**footwear for men**); Vee Footwear, Inc., Bridgeport, Conn. (**footwear for women**); Cranbar Corp., Ponce, Puerto Rico, a wholly owned subsidiary of Uniroyal, Inc., New York (**footwear**); and Clippard Instrument, Inc., Paris, Tenn. (**coils**).

Dumping Cases: Having received advice from the Treasury Department that **picker sticks** from Mexico and **regenerative blower/pumps** from West Germany are being, or are likely to be, sold at less than fair value, the Commission has begun an investigation under section 201(a) of the Antidumping Act of 1921 to determine whether an industry in the United States is being or is likely to be injured, or is prevented from being established by reason of imports of such merchandise into the United States.

Section 337 (Unfair Import Competition) Cases: On Oct. 1, the Commission received a complaint under section 337 of the Tariff Act of 1930, filed by the Alliance Manufacturing Co., Inc., Alliance, Ohio. The firm alleged unfair methods of competition and unfair acts in the import and sale of **antenna rotary systems.** Cornell-Dubilier Electronics has been named as importing and offering for sale the subject product. The Commission has initiated a preliminary inquiry into the issues raised in the complaint to determine whether there is good and sufficient reason for a full investigation.

The Commission received another complaint under section 337, filed by McDermott & Green, Inc., Sausalito, Calif. The firm alleged unfair methods of competition and unfair acts in the import and sale of **variable displacement flower holders.**

Other Agencies

Treasury—Dumping Cases: The Treasury Department has announced affirmative findings of less-than-fair value (LTFV) sales in its investigations of **regenerative blower/pumps** from West Germany and **picker sticks** from Mexico. These cases have been referred to the Tariff Commission for a determination as to whether an American industry is being, or is likely to be, injured.

A new antidumping investigation has been initiated by Treasury with respect to **45 r.p.m. flat spindle adapters** from the U.K.

Commerce — Adjustment Assistance: On March 1, the Commerce Department announced certification of a trade adjustment proposal submitted by Bernie Shoe Co., Haverhill, Mass. The government will provide, under certain terms and conditions, direct loans totaling approximately $806,900, and technical assistance to enable the firm to implement its recovery program.

Labor—Adjustment Assistance: The Bureau of International Labor Affairs announced that approximately 700 former employees of the Queensboro, Ky., plant of the General Electric Co. have been certified as eligible to apply for trade adjustment assistance. The Labor Department certification follows a Tariff Commission report that the workers became unemployed because of increased imports of electronic components which resulted in major part from trade concessions.

ASIE Exams For International Traders To Be Held May 11

Career international trade examinations are being offered May 11 by the American Society of International Executives for those interested in professional recognition of their talents on the basis of experience. These 20th semi-annual examinations, in commercial centers throughout the United States, are offered in three categories: Certified documentary specialist, for which a year's experience is required; certified international executive, two years' experience; and qualified international executive, five years' experience.

Two months' study time should be allowed, according to ASIE. Applications must be approved by Apr. 19. Information on study outlines and fees is available in a free brochure from ASIE, 734 Land Title Bldg., Philadelphia, Pa. 19110.

AMONG THE FORTY—*The Bell & Howell equipment display was one of the many attracting keen interest at the Milan Trade Center show of U.S. printing-related items.*

Trade Visitors From 14 Nations View U.S. Printing Equipment In Milan

Forty U.S. manufacturers of offset printing presses, photo composition equipment, computerized typesetting equipment, and related items found a receptive audience at the Milan Trade Center's 10th Anniversary Exhibition, Jan. 22-26. Sales of $543,000 were recorded and the new-to-market firms alone expected to conclude more than $3.5 million worth in the next 12 months.

Guests at the special ceremonies inaugurating this event included Italian Minister of Foreign Trade Matteo Matteotti, Milan Fair Secretary General Michele Franci, and U.S. Ambassador John A. Volpe.

In addition to the visitors from all sections of Italy, the more than 1,300 trade visitors included a particularly sizable attendance from Yugoslavia, Switzerland, and Greece and smaller contingents from 10 additional countries.

Groups from Yugoslavia

The U.S. Embassy in Belgrade and Yugoslav travel agency Kompas organized a tour of Yugoslav businessmen and technical directors to visit the exhibition. One group came from Belgrade by bus and a second group flew in from Zagreb. They were accompanied by Douglas G. Hartley, U.S. Attache.

The following items were reported to have been of greatest interest to the Yugoslavs: electronic photo typesetting equipment, vacuum printers and camera light systems, optical readers, offset presses, screen tints and photo chemicals, vertical process cameras, screen printers, carbonless paper, special inks.

A first for many

Nineteen U.S. companies used this exhibition to penetrate the Italian market for the first time and a greater number reported they had made their first trade contacts in other countries through this event. Eleven representation agreements were concluded and 29 additional agent/distributor arrangements and joint ventures were under negotiation at show's end.

Stanley E. Baldwin, Italian representative of Compuscan Inc., Teterboro, N.J., in addition to reporting high sales figures for the firm's optical reader for computer typesetting, stated that the company had reached the Yugoslavian and Greek markets for the first time through this event.

Lawrence J. Burke, Director of Marketing, PM Color, Inc., Chicago, described the exhibition as "excellent–fantastic job of organization." In addition to making substantial floor sales, he appointed agents for Spain and Switzerland and penetrated the Italian, Yugoslavian, and Libyan markets for the first time with his screen printer which utilizes a new principle for multicolor prints.

A further attraction was a technical seminar chaired by Michael Bruno of the International Paper Co.

Ambassador Volpe, commenting on the results of the exhibition, said, "I read these figures with perhaps a sharper appreciation than usual because I was there. The Milan Trade Center has been well launched into its second decade. The sales results speak for themselves."

PRECISION VIEWING—*Also at the Milan printing exhibition, visitors are attracted to the microscopes that were in use at the Direct Image Co. booth.*

Laser, Electro-Optics Display Scores Success At Tokyo Trade Center

"Without these exhibitions, our international sales efforts would be much more time-consuming and expensive . . .", commented a representative for Photo Research Corp., as the Laser/Electro-Optical show closed last month at the U.S. Trade Center, Tokyo.

Fifty-two U.S. firms exhibited their equipment. Five had not exported before and 13 were new to the Japanese market. Projected 12-month sales for these newcomers alone totaled $1.4 million. The attendance of 2,700 registered visitors and the overall sales results reinforced the strong interest and demand for U.S. laser and electro-optical equipment in Japan.

The Japanese business community has come to view the U.S. Trade Center show in this product theme as the leading display of the latest state-of-the-art equipment exhibitions in Japan. U.S. technology leads Japan and third-country competition in commercial applications of lasers and electro-optical equipment. Japan is constantly looking to the United States for new applications of this equipment.

The earlier laser and electro-optical equipment exhibition held at the U.S. Trade Center in June 1972 was the first showing of such equipment to be held in Japan. It registered the second highest number of visitors of any of the Tokyo Trade Center shows that had been held since the Center's opening in 1963.

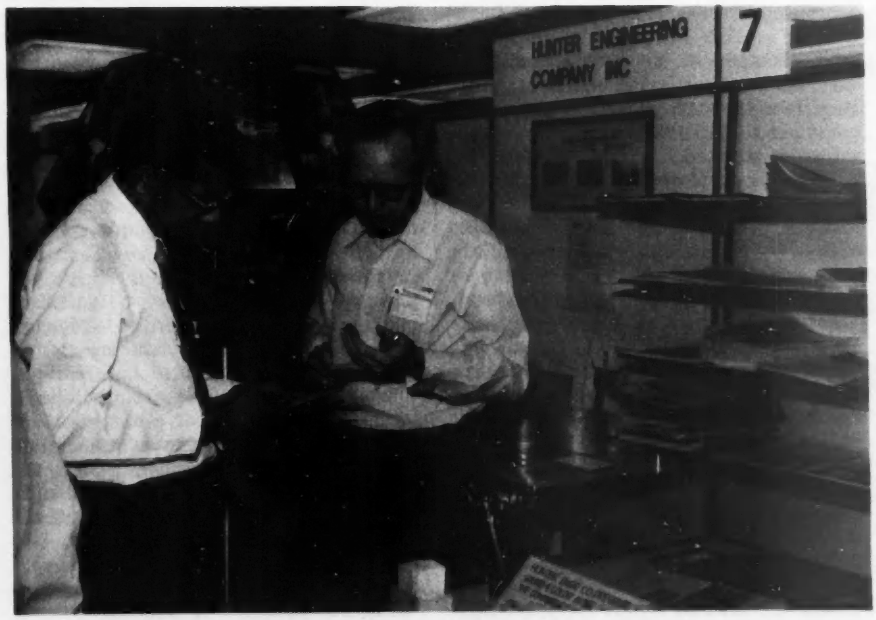
REPEAT PERFORMANCE — *Crowds viewed last month's laser and electro-optical equipment exhibition at the U.S. Trade Center in Tokyo. Similar show had been popular in 1972.*

Metalworking Machine Show In Singapore Points To U.S. Sales

An exhibition of U.S. metalworking equipment at the U.S. Regional Trade Center in Singapore has led to projected sales of $2.8 million over the next 12 months. The exhibition, a Joint Export Establishment Promotion (JEEP) event at the U.S. Regional Trade Center in January, drew prospective buyers and agents from Thailand, Malaysia, Hong Kong, and Indonesia, though the majority were from Singapore.

Seven U.S. companies actively participated in the exhibition: Applied Power International, Brush Research Manufacturing Co., Hunter Engineering Co., Ridge Tool Co., Stoody International, Tapmatic Corp., and Paul E. Moss & Co. Kingsbury Machine Tool Corp. also displayed materials.

The participants obtained three export representative leads and signed, or expect to sign, two representation agreements.



MAJOR ACHIEVER — *Hunter Engineering Co., Riverside, Calif., was a major achiever at recent metalworking equipment exhibition in Singapore.*

Suppliers Of Farm Equipment Invited To Seminars In Ecuador

Requirements in Ecuador for agricultural machinery and equipment will get attention at agricultural productivity seminars in June at Quito and Guayaquil under the sponsorship of the U.S. Embassy and Consulate General in those cities. Ecuador is now in an economic boom spurred by new petroleum exports, but its agricultural sector has been lagging.

U.S. seminar participants are expected to include representatives of agricultural equipment suppliers. Firms interested may contact Herbert Lindow, Bureau of International Commerce, U.S. Department of Commerce, Washington, D.C. 20230, telephone 202-967-4465.

Worldwide Business Outlook

Soviet Economy Picking Up, Meets Revised Growth Goals

Following the "recession" of 1972, the Soviet economy is currently on an upswing, according to the U.S. Embassy in Moscow.

Moderately good performance of key indicators, led by growth in agricultural production (particularly grain output), was registered during 1973. Production growth rates in most sectors matched or exceeded the norms set for 1973 at the December 1972 sessions of the Supreme Soviet. These goals were sharply reduced and restructured, to the detriment of the consumer sector, vis-a-vis those set for 1973 within the framework of the Ninth Five-Year Plan (1971-75). This phenomenon was caused largely through underfulfillment of most growth targets in 1972, particularly in agriculture where adverse weather conditions resulted in a near-disastrous harvest.

The Soviet GNP, amounting to the equivalent of approximately $580 billion in 1972, grew during 1973 to an estimated $615 billion. GNP in 1974 is expected to reach $650 billion.

The performance of the economy in 1973 generally did not measure up to the original expectations for the year under the current five-year plan. As a result, it would appear that growth indices for most sectors of industry and agriculture will not meet the targets of the 1971-75 plan. The structure of the Soviet economic system is such, however, that underfulfillment of the five-year plan is of less consequence than fulfilling annual — albeit reduced — targets, since the five-year plan document is at best only a roadmap of directions the party and government wish the economy to take.

For additional information on doing business with the Soviet Union contact the USSR Affairs Division, Bureau of East-West Trade, Room 4323, U.S. Department of Commerce, Washington, D.C. 20230, phone 202-967-4655. Readers may also be interested in a new Commerce publication, *Trading With the USSR*, OBR 74-01, available for 30¢ from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or any Commerce District Office.

Historically, Soviet economic efforts have favored the output of capital goods (so-called Group A) in preference to merchandise intended for the consumer sector (Group B). This situation continued in 1973, with producer goods showing a growth of 8.2 percent above 1972 levels as opposed to a 5.9 percent increase in production of consumer goods; and results throughout the Ninth Five-Year Plan to date have shown greater output of capital goods, although the plan was characterized at its inception as emphasizing the needs of the Soviet consumer through reduced growth of capital goods production.

Soviet planners appear to be sufficiently satisfied with the overall strength of the economy to implement the long-delayed adjustment of production in favor of the consumer sector. Plans for 1974 call for 7.5 percent growth in Group B against a 6.6 percent projected growth rate for Group A.

Low labor productivity and under-utilization of existing industrial resources continue to be major problem areas hindering rational and efficient expansion of the Soviet economic base. Labor productivity, while growing by 6 percent in 1973 versus the reduced 1973 target of 5 percent, still fell short of the 6.5 percent projected under the five-year plan umbrella. The problem remains chronic because sufficiently lucrative incentives have not been devised (given the non-consumer orientation of the economy) to induce Soviet workers to labor harder and more efficiently.

More efficient utilization of resources is another goal to which Soviet planners devote close attention. However, 1973 witnessed a continuation of the historical trend of lower annual growth rates in industrial production relative to the growth in fixed assets. In 1973 industrial production rose 7.4 percent in the face of an 8 percent (or 92 million ruble) growth in plant and equipment.

The overall performance of the Soviet centrally-planned economy, together with the persistent difficulty of applying the results of R&D to production, has created a technology gap between the USSR and Western industrialized nations. Recognizing the importance of bridging this widening gap, in recent years the USSR has begun looking toward western countries as sources of all types of advanced technological processes in order to reduce or eliminate the massive domestic investments otherwise required in attempting to keep pace with foreign technical advances. In this context, international trade plays a crucial and ever-increasing role for the Soviet Union.

Excepting agricultural commodities, the USSR is essentially self-sufficient in raw materials and finished products. Endowed with natural resources in abundance, many of them still insufficiently explored, the Soviet Union has traditionally been autonomous in energy and is a net exporter of oil, natural gas, coal and electrical energy. However, in response to ever-increasing domestic energy requirements, the USSR has begun to seek foreign assistance (chiefly from Germany, Japan and the United States) in harnessing geographically remote oil and natural gas deposits and exploiting selected Siberian mineral veins. This trend is expected to intensify during the remainder of this decade.

Agriculture's 14 percent growth in 1973 strengthens the internal food supply position but tempers the prospects for U.S. exports in 1974. The 222.5 million-ton grain harvest and the 90 million procurement figure are new records. Oilseeds at 7.34 million tons also improve the domestic feed supply situation at a time when world supplies are tight. With this strong performance in the crop sector, it is unlikely that the United States in 1974 can match the approximately $900 million sales of grain and soybeans reached last year.

Growth was more modest in the livestock sector. While numbers of cattle, hogs, and sheep increased, the output of meat declined. To improve the supply posture and to carry forward the upward momentum of previous years precludes any strong Soviet build-up of grain and feed stocks. And there is also some likelihood that supplementary feed supplies will be purchased during the year.

Overall agricultural trade prospects, while dimmed considerably by the good

EAST-WEST CONTRACT—*An $8.5 million contract for the sale of 39 International H-400C pay loaders, parts and attachments is signed by A. V. Engibarov (left), president of Traktoroexport, USSR export-import organization, and R. J. McMenamin, International Harvester Overseas Division, as R. D. Musgjerd, Overseas Division president, looks on. Delivery will begin soon.*

harvest results, could improve as the year progresses, particularly if world commodity prices decline.

Foreign trade under the Soviet constitution is a state monopoly, administered by the USSR Ministry of Foreign Trade. The volume of trade, composition of exports and imports, and geographical distribution of trade are determined by the state, which conducts foreign trade operations through specialized All-Union Foreign Trade Organizations (FTOs) established for that purpose. Individual commercial transactions undertaken by specific FTOs are governed by state planning requirements, provisions of bilateral economic/commercial agreements with individual trading partners, and foreign exchange availabilities and requirements.

Vital roles

In addition to the Ministry of Foreign Trade and the individual FTOs, the following state bodies exercise vital roles in determining whether or not to engage in a particular transaction:

► State Committee for Science and Technology (SCST)—An organization responsible for raising the technical level of production in all branches of the economy. Plays a major, often crucial, role in selecting major projects for the national economy and in establishing priorities for implementation.

► State Planning Committee (GOSPLAN)—Sets foreign trade priorities within the framework of annual, five-year, and long-range economic plans.

► USSR Bank for Foreign Trade (VNESHTORGBANK)—Responsible for all foreign trade financing.

► USSR Chamber of Commerce and Industry—an organization functionally independent of the foreign trade apparatus which works closely with the Ministry of Foreign Trade, individual FTOs, and end-user industrial ministries in promoting trade.

The Ninth Five-Year Plan (1971-75) for development of the Soviet economy indicates major trade opportunities for U.S. business firms in heavy industries, exploration and development of natural resources, and infrastructure development including power, communications, and transportation.

The basic industrial branches for which products and technology appear to be in most demand are: air traffic and airport ground control equipment; automated machine tools; automotive maintenance/servicing equipment; automotive production; chemicals (especially plastics); electronics; gas/petroleum exploration and exploitation; and gas/oilfield development (including compressors, pumps, pipelines, etc.)

The annual plan for 1974 provides for a sharp increase in the projected growth rate of consumer goods output; movement toward increased emphasis on the consumer sector is expected to continue in subsequent years. This would indicate heightened possibilities for sales of consumer goods and, particularly, manufacturing equipment for light industry to the USSR. Purchases already made by the Soviet Union of knitting machines, equipment to manufacture tableware, and a plant to produce soft drinks would appear to confirm a trend toward increased foreign currency allocations for consumer-oriented goods and equipment.

Nigeria Offers Unique Opportunities For U.S. Trade, Services, Investment

Oil-rich Nigeria offers unique opportunities for U.S. trade, technical services and investment, in the view of George A. Hays, Commercial Attache at the U.S. Embassy in Lagos.

It is a politically stable country of over 70 million people with the financial resources and will to move ahead on a number of infrastructure and social service development projects. The constraint will be the executive capacity within the country to implement and manage all that is planned.

In 1974 Nigeria can be expected to have a record trade surplus from its increased return from crude oil. GDP will probably show a 9 to 10 percent rise.

Government development projects

At the Federal Government level, technical consultants, contractors, equipment and supplies are required for a range of development plans and projects for highways, ports, airports, electric power installations and communications facilities.

One American firm, for example, is working on a Lagos city mass transit plan for the Ministry of Works and Housing; a second firm has a contract with the Federal Ministry of Transport covering a central transport planning unit, and a third is advising the latter ministry on the installation of navigational aids and communications equipment under the airport development program. Several U. S. firms have been active in planning highway and bridge construction.

Major oil-based projects involving the Federal Government are expected to include a second refinery at Warri, a nitrogenous fertilizer plant, and large liquefied natural gas facilities to utilize gas which is currently flared.

All 12 states have numerous development programs under way or planned in agriculture, education, hospital and medical facilities, and water and sewage systems. There is considerable opportunity for American consultants to conduct feasibility studies, and to act as project advisors, contractors, turnkey operators and equipment suppliers.

The firms that will be favored in securing the business are those that establish resident offices and make the effort to build up strong local capabilities. American equipment suppliers have suffered in the past from failure to have local representation which could ensure after-sales service and spare parts.

The Federal Government recognizes that if Nigeria's potentialities are to be fully realized, foreign enterprise, experience and skills are required. Subject to certain restrictions on areas of investments and percentage of equity held by overseas firms in certain activities, foreign investment is welcomed, especially when it gives Nigerians the opportunity to acquire technical and managerial skills.

A company granted "approved status" for its capital investment is permitted to remit its capital and/or dividends whenever it chooses to do so, subject, of course, to any foreign exchange restraints prevailing at the time of application. If a company is granted pioneer status it is exempt from corporate tax for a period of two years which may be extended up to five years from the commencement of production.

New firms are allowed an initial allowance of 15 percent of expenditures on construction of industrial buildings and 20 percent on plant and machinery, as well as an annual allowance for residual expenditures.

The flow of foreign investment into Nigeria is expected to increase over the next few years, particularly in semi-manufactures and capital goods that maximize local added-value. The outlook is promising for industrial projects in glass, brick, paper products, salt, sugar, super phosphate, air-conditioning equipment, pharmaceutical products, tires, and passenger vehicle and trucks assembly. There is great need and interest in international standard hotels and accompanying facilities. Most of these anticipated ventures are expected to involve technical consultants, turnkey operators and joint-venture partners from abroad.

Finding representatives

U. S. firms not now represented in the market may find that it takes considerable time and effort to find indigenous firms established and qualified to act as Nigerian distributors or representatives. With perseverance, however, competent agents can be located.

In some instances new lines to the market must be assigned to relatively young companies which lack the working capital to purchase goods on a letter of credit basis,

maintain stocks, or allocate funds to train personnel and build maintenance service capabilities.

To be successful in the market, U. S. firms thus must on occasion be prepared to invest in their distributor American staff and/or training and to furnish revolving credits or consignment merchandise until profitable operations can be established. Many Nigerian sales representatives tend to need supplier support or demonstration units which are essential in a market where customers react largely to equipment that can be seen and operated.

There continues to be limited new agency interest among the well-established expatriate trading firms particularly active in mechanical and technical equipment; these companies are currently adjusting the scope of their operations to the Nigerian indigenization decree, which will control and limit their future activities in the wholesale and distribution trade. After this month no alien enterprise may continue to operate in wholesale distribution or act as a distribution agency for machines and technical equipment unless the paid-up share capital of the enterprise exceeds approximately $600,000 or the turnover $1.5 million. If the latter conditions are met, the company must have a 40 percent equity participation of Nigerian citizens or associations.

Doing business in Nigeria

Visiting American businessmen find Nigeria's business "elite" and governmental officialdom widely traveled, sophisticated and highly selective in their choice of goods and services. Many have received education or have traveled in the United States. There is generally a high regard for American goods and know-how.

U.S. exporters initiating trade with unknown Nigerian firms may obtain commercial profiles and background information on a specific firm through a World Traders Data Report (WTDR) at a cost of $15 each. Request forms are available from the Export Information Division, Room 1033, U.S. Department of Commerce, Washington, D.C. 20230, or through any Commerce District Office.

Information such as trade and financial references, products handled and firms represented will be useful to exporters taking the necessary precautions for doing business in new markets.

A number of American firms have had a common and continuing problem with solicitations from unscrupulous petty traders; the trader's inquiry will usually take the form of a request for samples or a small trial shipment, with the promise of substantial follow-up orders if the product proves to be marketable. Ingeniously, some inquiries will contain bogus sight drafts or bank checks, or the buyers will agree to payment on delivery.

All movements of funds from Nigeria to other countries is subject to local exchange control approval. Goods are normally paid for upon presentation of documents, by depositing with a bank their value in Nigerian currency. There is, however, a statutory delay at present in the provision of foreign exchange.

The Nigerian authorities operate a system of classification whereby foreign exchange is provided for a few imports at sight or upon approval for payment, or for most goods at an interval of 90 days from date of shipment as evidenced by the bill of lading or at sight upon arrival of goods if this is later than 90 days from date of shipment. Foreign exchange is released for capital equipment, plant and machinery over a 1-4 year period.

Outlook For Trading With Indonesia Brightened By Favorable Developments

An improved balance of payments, a burgeoning demand for imports, currency readjustments and growing availability of Eximbank and other financing brighten the outlook for United States exports to Indonesia.

In 1973 U.S. exports reached a new high of $442 million, 44 percent more than in 1972, and the value of machinery exports, $126 million, was 53 percent greater than in the preceding year.

Investment activity is high and the climate remains good, adds the U.S. Embassy in Jakarta, although in a number of areas including petroleum, mining, manufacturing and forestry, investors may find the government seeking a bigger return for Indonesia. The government is also trying to accelerate the participation of Indonesians in foreign investment contracts.

Indonesia's rice production in 1973 recovered to something approaching its 1971 peak. However, the rice deficit persists. The tight worldwide food situation has reduced the availability of food aid and pushed up prices for commercial imports, making it costly to fill the gap. At the same time the problem has been eased by a remarkable turnaround in Indonesia's balance of payments, triggered by record export prices (especially for petroleum) and resulting in a large positive balance in net foreign exchange reserves.

Rice shortages, exacerbated by an upheaval in the government's domestic stabilization program, have pushed up consumer prices. Soaring export earnings, overseas inflation reinforced by rupiah devaluation, and unusually rapid increases in domestic credit and money supply have also contributed to consumer price inflation, which in 1973 approximated the 26 percent rate experienced in 1972.

With production rising and exploration intensifying, the petroleum sector continues to spark the economy. Two major LNG projects (one of which will deliver much of its output to the United States), and petrochemical and fertilizer (urea) plants are in various stages of negotiation.

Shipments of copper, Indonesia's newest major export, are growing, and a contract has been awarded for construction of one of two large nickel projects.

One project that may involve considerable domestic and foreign investment is the proposed iron and steel project in West Java. Working through P. T. Krakatau Steel, a wholly government-owned enterprise backstopped by Pertamina, spiral-welded tube and cold-wire drawing plants are already in operation. Discussions are taking place to establish a bar and section mill, a steel billet production facility and perhaps eventually, an integrated iron and steel production facility.

Despite heightened activity, recently there have been signs that the Indonesian Government is reexamining the pattern of its relationships with foreign investors on a fairly broad front. In forestry, petroleum, mining and possibly the manufacturing sectors there are indications that the government considers the terms under which foreign investors are now operating do not provide sufficient returns to Indonesia. What specific new policies may emerge from this reexamination is not yet clear.

New investment unit

With an increasing backlog of investment applications encountering long delays, President Suharto in August 1972 called for simplification of investment procedures. A major study and recommendations were completed in December 1972, and resulted in the establishment on June 1, 1973, of a new organization, the Capital Investment Coordinating Board (Badan Koordinasi Penamanan Modal, or B.K.P.M.).

President Suharto has stressed the B.K.P.M.'s function as "a coordinating body which must be able to handle and settle problems connected with both foreign and domestic investment in an integral manner and within the shortest time possible." While it is having growing pains, the new organization is clearly an improvement over its predecessor, and its centralized procedures should reduce delays. The potential investor now deals primarily (though probably not entirely) with the B.K.P.M. Exceptions to this are oil and gas, mining and forestry.

where preliminary arrangements must be made with the departments concerned.

While procedures may be simplified, potential American investors in certain fields should be aware that future agreements may require a greater return to Indonesia than in the past. The investment climate nevertheless remains favorable, especially for firms in labor-intensive or high-technology fields.

Eight more U.S. firms had investment applications approved during the first half of 1973. Three of them make electronic products—a labor-intensive field which is especially welcome under current Indonesian policies. Total capitalization of the eight new U.S. investments is $18.3 million, bringing the total of U.S. non-oil investments approved since 1967 to $462 million—22 percent of all foreign investment approvals.

Japanese firms, however, are currently far more active in seeking to establish themselves in Indonesia. During the first half of 1973, applications were approved from 20 Japanese companies for investments totaling $84.5 million, concentrated in construction, textiles, and automotive and motorcycle parts manufacturing. They brought the total of Japanese investments approved since 1967 to $468 million—nosing out the United States and giving Japan a claim for the first time to be the biggest non-oil investor in Indonesia.

The U.S. Export-Import Bank has moved into a more active phase in its Indonesian operations. During the past few months several large Eximbank loans have been approved to Indonesian private and public corporations. The biggest was a loan of $54 million to Pertamina, the state-owned oil company, to help finance the sale of $120 million in U.S. goods and services for establishment of an oil refinery at Cilacap, on the south coast of Java. Exim has also announced loans of $5.5 million and $4.2 million respectively to Garuda, the national airline, and privately-owned Bouraq Indonesia Airlines, to finance purchase of U.S. jet aircraft.

Outstanding preliminary commitments are substantial and should more than double Eximbank's exposure in Indonesia. The Overseas Private Investment Corporation (OPIC) also seems to be becoming more active in Indonesia, particularly with respect to investment financing.

The United States and Indonesia are nearing agreement on a bilateral convention on taxation applicable to earnings derived from Indonesian sources by U.S. firms and individuals and vice versa. The agreement would also permit a resident of either state to apply to the authorities of that state for relief. The eventual entry into effect of the tax convention is expected to give positive encouragement to U.S. business in Indonesia by improving the basis for projecting tax costs and providing a new channel for the resolution of tax disputes.

Saudi Arabian Economic Growth Trend Continues Through War, Oil Embargo

Despite the Middle East conflict, the oil embargo on the United States and several other countries, and a severe cutback in oil production, informal economic indicators in Saudi Arabia remain highly positive.

Imports continue to flow into the country at a rate between 30 and 40 percent higher than a year ago, according to the U.S. Embassy in Jidda. Important contracts are being let, and rapid and imaginative development continues to be the government's main concern.

The economy continues to surge due to heavy government spending on both the civilian and defense sectors. The Arab-Israeli war in October (in which Saudi Arabia was not directly engaged) did not create new shortages in the Kingdom and although prices rose under the threat of such shortages, they fell back after the cease-fire.

GNP breaks $1,000 barrier

During the latter half of 1973, the gross national product of Saudi Arabia broke through the $1,000 per capita level, and it is predicted to break the $2,000 per capita GNP level in 1974. Probably few countries (and perhaps none the size of Saudi Arabia) have doubled their GNP so quickly. Oil production may have represented as much as 60 percent of the total GNP before the price increases, but as much as 80 percent after the increases.

With a first census due to be completed in 1974, more accurate figures on disposable income may become available, but estimates from knowledgeable sources indicate that such income in 1973 was probably less than half of the total revenues per capita from oil. Disposable income is estimated at $420 per capita.

Major projects under way include the Jidda airport; the "backbone" coaxial cable link now being constructed from the Red Sea to the Gulf by a European firm; major defense service installations; and still more important, major new oil facilities whose construction is still going forward.

Many other projects and industrial proposals are proceeding through feasibility studies towards implementation far more rapidly than was predicted a year ago. Several of these are in the defense facilities field and are individually as large as the airport project; others are in the civilian industrialization area of the economy and over a period of years involve several billion dollars in investment and construction.

Saudi Arabia is clearly committed to a policy of utilizing the marketing of its oil as an incentive for heavy industrial development during the coming decade. Steel mills, petrochemical installations, further refinery capacity, major natural gas and methane plants, even shipbuilding and involvement in tanker purchase and operation are only a part of the longer-range projects under active study.

Infrastructure for this industrialization and for rapid increases in the standard of living of the general population is also being planned and contracts are being let. Particularly in electricity and in water desalination, the Kingdom is moving forward with a rapidity unmatched in earlier years.

During the current fiscal year, project spending of more than $4 billion is called for in the budget, including $240 million for agricultural projects in the Kingdom, $485 million for roads, and $435 million for municipalities. There are also heavy defense expenditures for installations of all types.

In addition, the Ministry of Finance (which is preparing to open two Intercontinental hotels during 1974) has substantial project spending of almost $325 million for the current fiscal year alone. Obviously, not all of this can be accomplished but there is gradually less and less inhibition to spend on the part of the Saudi Government.

Partly as a result of these new priorities for project spending, there has been a dramatic increase in the number of foreign staff in the country and it is becoming easier to obtain visas for such workers and managers.

Terms of industrialization

The shift from long-range marketing of Saudi oil through ties with downstream facilities, to an emphasis on building industries at the source of the cheap energy itself, is the most striking change in the economic policy of the Kingdom in the past year. The implications for both imports into Saudi Arabia and for links between the Kingdom and consuming nations needing its crude are of major importance.

Working out the ground rules for industrial joint ventures in the Kingdom, some of them tied directly to crude purchases for overseas markets and others not, will be a time-consuming process for all parties.

Priorities among the kinds of industries, e.g., steel, petrochemicals, or lighter metals such as aluminum, have still to be set in negotiations or through feasibility studies, some of which are already under way; but it is clear that Saudi ministries responsible for the industrial development of the Kingdom are requiring that all manufacturing projects be viable and profitable. Since most of these are export industries, companies or governments will have to guarantee market arrangements.

While the government is willing to consider offering some protection to new do-

mestic consumer industries, this will be done only after the industry is in operation and proves unprofitable in the face of competition from imports.

American firms have in recent months gradually increased their numbers of representatives in the Kingdom, though the number of U.S. firms new to the market is small. A growing number of firms are making use of new Saudi-based joint ventures in consultancy and engineering services to evaluate their moves into the Saudi market.

A coordinated energy supply and demand system for most of the world has suddenly become a necessity and a proposed new energy action group could have a major impact on the markets of all of the oil states, Arab and non-Arab. The oil states and their economies have become the focus of attention for almost every country outside the eastern bloc.

American firms will play a role in the drive to industrialize the most important of these states, the Kingdom of Saudi Arabia, both because of the long-standing industrial relations between the United States and Saudi Arabia and because U.S. multinational firms can offer worldwide marketing facilities for Saudi industrial production.

The intrusion of government-to-government bargaining for crude oil will create difficulties but will also hopefully stabilize the supply situation and eventually open up new opportunities both in sales and servicing. The Kingdom remains in need of almost every category of imports and services. This need will continue and even increase in future years as new industries are built up and come on stream. The need for creating infrastructure to support these industries will eventually be dwarfed by the need for servicing the new industries spun off by these primary producers.

Devaluation made dollar-priced goods highly competitive and of special interest to all importers. Several reported a doubling of orders for 1973 over 1972 with similar gains expected in 1974. Large earthmoving machinery found one of the best markets in the world and projections indicate further increases in the current year. Automobile sales were especially buoyant.

The sale of consumable goods of all kinds will accelerate, particularly those related to families newly attuned to a relatively affluent level of income without significant taxes to hamper their spending. The completely free enterprise character of the economy makes every Saudi potentially an entrepreneur, directly or indirectly, and this phenomenon will continue to be an incentive for import and sale of every conceivable kind of consumer item for the five to six million people in the country.

U.S. firms should recognize the opportunities in the three market areas of the Kingdom: the Eastern Province with its oil-oriented economy, Riyadh with its five-year plan of development for the entire country, and the commercial center of Jidda, where industrial development and trade will be further stimulated by opening of the Suez Canal.

Devaluation has sharply increased the range of possible competitiveness of American firms in construction, housing, and service areas. Including service contracts, Saudi Arabia could become a billion dollar market for American firms within the next few years.

U.S. firms wanting to do business in Saudi Arabia should:

► Recognize that it is a prime market requiring resident representatives and permanent links.

► Consult with other U.S. businesses in the country which can be reached directly or through the Embassy at Jidda or the Consulate General at Dhahran.

► Support the Saudi agent or partner with service organizations and management consultancy services.

Sixteen Countries Seek UNDP Aid

Sixteen developing countries have submitted 27 preliminary requests for financial and technological assistance from the United Nations Development Program (UNDP).

U.S. firms are cautioned that these projects may not be approved for technical and/or other reasons.

Interested U.S. firms may obtain individual summaries of these projects from the Trade Opportunities Program, Overseas Business Opportunities Division, Rm. 1322, U.S. Department of Commerce, Washington, D.C. 20230. Please include a pre-addressed label with your request, and identify each project desired by number, country and title.

BGD/72/018 — BANGLADESH — Soil survey interpretation.

BGD/73/002 — BANGLADESH — Advanced and specialist aeronautical training.

BOL/71/532 — BOLIVIA — Evaluation and utilization of energy resources.

BRA/73/003 — BRAZIL — Environment control program in the state of Guanabara.

CHI/73/005 — CHILE — Metalworking industry testing center.

ELS/71/512 — EL SALVADOR — Faculty of engineering, University of El Salvador.

GUA/73/005 — GUATEMALA — Industrial development and promotion.

HON/72/011 — HONDURAS — Integrated agricultural development in selected areas.

IND/73/010 — INDIA — Assistance to Indian Petrochemicals Corp., Ltd.

IND/73/020 — INDIA — Post graduate agricultural education and research (Phase II).

LAO/73/008 — LAOS — Development and promotion of handicrafts.

PER/71/551 — PERU — Management and integrated utilization of tropical forest.

PER/73/024 — PERU — National institute for research and training in telecommunications.

SUD/72/035 — SUDAN — Institute for agricultural technicians in the Southern Region, at Yambio.

SUD/73/001 — SUDAN — Land development project, Southern Sudan.

SUD/73/023 — SUDAN — Comprehensive employment strategy mission.

TUR/72/034 — TURKEY — Cement development and research center.

YEM/73/007 — YEMEN — Institutional support to the ministry of the economy.

YUG/72/018 — YUGOSLAVIA — Mastering of modern technology in iron and steel metallurgy (revised).

YUG/73/003 — YUGOSLAVIA — Industrial utilization of non-metallic minerals.

YUG/73/004 — YUGOSLAVIA — Complete processing of low grade ores from Macedonian deposits.

YUG/73/006 — YUGOSLAVIA — Center for furniture joinery industry development, Sarajevo.

YUG/73/009 — YUGOSLAVIA — Study of water resources and their exploitation in Istria.

SAU/73/004 — SAUDI ARABIA — Industrial studies and development center, Riyadh, (Phase II).

SAU/73/006 — SAUDI ARABIA — National transport survey (Phase II).

SOM/73/005 — SOMALIA — Fisheries development.

SOM/73/006 — SOMALIA — Strengthening of veterinary laboratory services (diagnosis and vaccine production).

Calendar For World Traders

March 21—New York—FCIB Drug, Chemical and Food Export Club luncheon meeting, Advertising Club.

March 28 — Memphis — International Affairs Forum, Wesley Foundation. Sponsors: American Association of University Women, International Club of Memphis, Mid-South Exporters Roundtable.

April 2-3 — Nashville — First Tennessee International Trade Conference, Hilton Airport Inn. Sponsors: Tennessee Department of Economic and Community Development, Memphis District Office.

April 9 — Louisville — Kentuckiana World Commerce Council Meeting, Holiday Inn, Brownsboro East.

April 11 — Memphis — Export Forum, Sheraton Motor Inn. Sponsors: Mid-South Exporters Roundtable, Memphis District Office.

April 16 — Memphis — Memphis World Trade Club, Southwestern Univ. Program on energy conservation presented by Memphis District Office.

April 23 — Memphis — Southeastern Regional Seminar on Brazil, College of Business Administration, Memphis State Univ. Sponsors: All Southeastern District Offices, Memphis State Univ., Memphis World Trade Council. Speakers will include Bernard J. Cahill of Commerce's Office of International Marketing.

April 24-25 — New York — Conference on Protecting Overseas Profits Through Foreign Exchange Techniques, World Trade Institute.

Worldwide Business Services

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors overseas. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine. The section that follows presents details about licensing proposals, sales and agency opportunities, and construction projects.

Licensing, Investment Abroad

GREECE — A general contracting firm wishes to lease space to a U.S. firm — especially department store or drug store— interested in expanding its activities by establishing a branch in Greece. Firm has been awarded contracts for development of underground areas of two central squares in Athens. The Klafthmons Square project, reportedly to be completed in April, consists of a three-floor underground car station (600-car capacity) and a commercial center which will occupy part of the first floor. Net area of the commercial center is 1,900 sq. m. FRAXEKT S.A., 91-93 Academy St. Athens 141. WTDR. P-74115. OPIC.

1021 — GREECE — Partnership seeks joint venture with U.S. firm to develop **copper ore deposit** 37 miles north of Thessaloniki. Reported to have encouraging geological survey report in English describing large surface deposits of copper pyrite, copper oxides and galena in aplite formations. Good transportation and adequate local water resources reportedly available. Write: Georgios Grammatikos, 17 Filikis Eterias St., Thessaloniki, Greece, or Interuniversal Chartering, S.A., 99 Kolokotroni St., Piraeus, Greece. WTDR. P-74107. OPIC.

1300 — KUWAIT — Newly formed company with excellent connections seeks joint ventures with U.S. firms in **off-shore drilling and off-shore petroleum service activities.** Interested in joint ventures with experienced companies on specific projects. Can provide capital if needed and local base of operations. Company intends eventually to become involved in wide range of construction and service activities but will concentrate initially on Persian Gulf area. Hopes to operate beyond Gulf later and get into underwater surveys and soil tests, pipeline laying, marine transport and dredging. Company also interested in hiring experienced general advisor and would be interested in American applicants. Write or call Donald C. Stow, Foreign Investment Services Staff, BIC, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230; phone, 202-967-3786. P-74108.

1629, 8911 — BRAZIL — A company seeks know-how, technical assistance and investment for **electrical, construction and engineering services, especially railway electrification.** Firm has 700 employees and has performed work for the Brazilian Government as well as private industry. The U.S. firm would be expected to furnish 49 percent of the total investment in the joint venture. General Meton Borges Gadelha, CIVEL, Rua da Lapa, 180-12° andar ZC-06, 20.000 Rio de Janeiro, Guanabara, Brazil. WTDR. P-74126. OPIC.

2330 — MEXICO — A firm is interested in a licensing arrangement with a U.S. company for use of **patterns and models for women's wear.** Firm currently manufactures a full line of women's wear for the domestic market on a contract basis. It has about 100 employees at two locations. Hector Sotomayor Sanches, Manager, Maquilas y Confecciones Modernas, S.A., Correo Mayor 109, Despacho 402, Mexico City 1, D.F. P-74124.

2499 — NIGERIA — Manufacturer of such wood products as tableware, salad bowls and candle holders seeks license. Wants to obtain **U.S. wood technology, particularly in area of structural engineering.** Afroware Co. Ltd., P. O. Box 108, Ibadan, Nigeria. P-74119.

2611 — HONDURAS — Newly estabished Government forestry corporation seeks U.S. participation in **pulp and paper project.** The corporation will update past feasibility studies to determine proper location, size and operation of the enterprise. Estimated cost is over $100 million. Interested U.S. companies should be aware that the new forestry law requires that the Government of Honduras have 51 percent majority in such projects. Lic Ricardo Reyes, COHDEFOR, Edifico Mieence Soto, Tercer Piso, Tegucigalpa, Honduras. P-74117. OPIC.

2650 — SPAIN — Large manufacturer of **paperboard containers and boxes** seeks joint venture with U.S. company making similar products. The Spanish firm is interested in obtaining latest technology and equipment, also marketing assistance. A U.S. participant is offered 40 percent equity in the proposed venture. The Spanish company is a major supplier of paperboard containers in the Barcelona area. Its gross assets are estimated at $6.4 million. Isidro Trepat, Managing Director, Graficas Francino Trepat, S.A., Apartado 105, calle Jucar, s/n., Tarrasa (Barcelona), Spain. WTDR. P-74109.

2879 — WEST GERMANY — Manufacturer and distributor of household insecticides, detergents, cleansing oils and polishes seeks licenses to manufacture **non-toxic household insecticides and repellents,** both spray and strip type. Also interested in cross-licensing. Firm's products well-known throughout Germany. Employs 150. Annual sales average over $5 million. Globol-Werk GmbH, D-8858 Neuburg/Donau, Postfach 1360, Germany. P-74110.

3357 — KUWAIT — Group of investors seeks U.S. participation in project to manufacture **cable and wire.** Products include bell and internal communication wire, annunicator, non-coaxial television and hook wire and thermostat and thermocouple wire. American firm would establish facility on turnkey basis. Would handle design, engineering, construction supervision and most probably management. Kuwaiti investors would provide bulk of capital, U.S. concern would take 15 percent equity. Theodore H. Kattouf, Commercial Officer, U.S. Embassy, P.O. Box 77, Kuwait. P-74113.

3440 — SWITZERLAND — Manufacturing rights for **structural steel and light metal alloy parts for application in the building industry.** Products of interest include easy-to-install window frames, doors, metal wall systems for warehouses and industrial buildings and metal office partitions. Also prepared to make lightweight, metal transportation containers, small to medium vessels, related equipment for the chemical and food industries and light metal industrial conveying equipment. Presently, firm manufactures structural metal items and small construction machinery. Employs about 150. Company is well equipped with machinery for sheet metal work, machine tools, and an engineering department. Walter Handelsmann, Karl Muller AG, 9325 Roggwil, Switzerland. P-74114.

3555 — SWITZERLAND — Manufacturing and distribution rights for **graphic arts and printing machinery, paper, film and foil converting equipment.** Firm presently produces printing apparatus including continuous form equipment. Has production and marketing facilities in several European countries. Employs around 450. Is a subsidiary of a Swiss manufacturer of offset printing presses. H. R. Braendle, Manager, Polytype Ltd., route de la Glane, 26, 1700 Fribourg, Switzerland. P-74121.

3559 — SWITZERLAND — Large consultant engineering firm and manufacturer of **complete solid waste disposal and water treatment plants** seeks cross licensing agreements. Interested in obtaining technology for **production of advanced waste water treatment systems for application in the third and mainly fourth stage.** Could include activated carbon filtering, oxydation and ozonation and reverse ossmosis, as well as deodorizing equipment. In the solid waste field it seeks recirculation equipment, new waste handling and compacting systems and related technology. It offers licenses for manufacture of sludge dewatering and waste and sludge incineration equipment. Firm operates 16 plants in 10 different countries, and employs around 6,800. Mr. Truninger, Von oll AG, Dept. Environmental Control, Postfach, 8021 Zurich, Switzerland. P-74112.

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Foreign Investment Services Staff, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to specific proposals.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce Office.

OPIC indicates that the country involved is eligible for investment insurance coverage written by the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

3559 — SWITZERLAND — Seeks manufacturing and distributors rights for **semiconductor production and processing equipment, instruments and materials.** Firm specializes in custom production of precision graduations for original equipment and instrument manufacturers. It distributes throughout Europe transparent mashs for use by the semiconductor industry. A subsidiary of a major Swiss manufacturer of analytical balances and instruments, company operates modern production facilities and has an excellent reputation. W. Schneider, Sales Manager, Mettler Optic AG, 8606 Greifensee, Switzerland. WTDR. P-74111.

3621 — FRANCE — Manufacturing rights for **stepping motors for automated operations.** Firm has domestic market for 1,000-1,500 motors annually. Presently, company makes electric hoisting motors, D.C. motors, motor generator sets, speed reducers and condensers. Employs 450. Andre Patay, S.A. Moteurs Patay, 99 rue Audibert-Lavirotte, B.P. 83-17 69456 Lyon Cedex 2, France. WTDR. P-74128.

4971 — ECUADOR — Investors seek experienced American building contractor to contribute technical assistance to **plan and build drainage and irrigation systems** on a privately owned, 24-acre cemetery, either on a royalty or a one-time fee basis. The investors are also seeking franchises for local manufacture to produce cemetery tents, bronze flower vases, coffin lowering devices and equipment to prevent corrosion of coffins. Auerlio Carrera del Rio, P.O. Box 20, Guayaquil, Ecuador. WTDR. P-74118.

5000 — GERMANY — A large firm engaged in real estate improvement, town planning, and property management, seeks contacts with U.S. **retail operators.** Firm proposes that U.S. companies would utilize the shopping centers built and managed by them. Firm believes German buyers prefer a wide range of foreign consumer goods, particularly specialized items not generally available locally and that typically American full-sized retail outlets from the department store level down to smaller specialty shops can operate successfully in Germany. Locations of existing centers where space would be available include Essen, Cologne, Bochum and Bonn. Contact: Foreign Investment Services Staff, Bureau of International Commerce, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74127.

6000 — ABU DHABI — Seeks to represent U.S. institutions willing to **finance commercial buildings (residential and office) costing between $750,000 and $3,750,000.** Prepared to represent companies engaged in financing, construction, and management of buildings. Hisham Al-Kuttab, Al-Hishami Trading Co., POB 4048, Abu Dhabi, UAE. P-74116.

8911 — FRANCE — A joint venture is sought with a U.S. **engineering firm principally engaged in urban and rural development in developing countries.** Company's objective is to participate in road and building construction, agricultural projects and resort development. S.C.E.T. (Ste. Centrale pour L'Equipement du Territoire Int.), 5 rue Bellini, 92806 Puteaux, France. WTDR. P-74125.

Investing In Brazil Guide Issued

A booklet entitled, "Guide to Investing in Brazil," has recently been published by the Brazilian Government Trade Bureau. The booklet covers such topics as Brazil's investment climate, its business organizations, taxation, labor market and economy.

For copies, write: Brazilian Government Trade Bureau. 551 Fifth Avenue, New York, N. Y. 10017. P-74120.

Licensing In U.S.

For additional information on these opportunities to manufacture foreign firms' products in the U.S. under a licensing agreement or in partnership, write the Investment Services Staff, Bureau of International Commerce, Room 4020, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2248), referring to the appropriate file number.

GERMANY — A German firm is offering for licensed manufacture in the U.S. a unique **patented toothbrush.** This brush, developed by a well known physician, facilitates up-and-down brushing. The two heads of the brush can be made to change position by means of a sliding switch on the handle. Patents have been obtained in 22 countries. **File 2542**

SWITZERLAND — Company wishes to license for manufacture and/or distribution in the U.S. its **bath oils, body lotions, colognes and soaps.** These products allegedly enjoy on the Swiss market probably the highest per capita sales volume of any toiletry brand in the world. Sales are also made throughout Europe and other areas. **File 2543**

SWITZERLAND — A license for the U.S. manufacture of a novel **curtain suspension system** is being offered by a Swiss firm. The specially designed aluminum rails and nylon gliders of this system virtually eliminate friction and make possible absolutely silent movement of curtains and drapes. Licensees in many countries have already been appointed, and a number of well known buildings in the U.S. are equipped with this system. **File 2544**

SWITZERLAND — A leading Swiss engineering firm and manufacturer of complete **solid waste disposal and waste water treatment plants** hopes to license its equipment in the U.S. The firm also in interested in exchanging novel technology with U.S. engineering and manufacturing companies in this field. Equipment offered for licensing consists of a complete, newly developed sludge dewatering plant for treatment of sludge produced from biological waste water plants and a complete combined solid waste and sludge incinerating plant. Company is well established in Europe and reportedly has supplied most of Japan's waste incinerating plants. **File 2545**

Papua, New Guinea Offers Right To Harvest Timber

The Government of Papua, New Guinea offers by application and negotiation the exclusive right to harvest all merchantable timber on an area of 133,600 acres known as the Kapuluk timber area. The area is located west of the Willaumex peninsula, on the north coast of New Britain, in the East New Britain District.

Interested parties are invited to register their intent to submit proposals and, if they are accepted as potential developers, to carry out investigations of the resource and to submit proposals for its development.

Copies of the brochure giving detailed information of the proposal are available free from: Department of Forests, P.O. Box 5055, Boroko, Papua, New Guinea. A copy of the brochure is available for inspection at the Construction and Forest Products Division, Department of Commerce, Washington, D.C., 202-967-2606.

Yugoslavia Invites Tenders For Supply Of Conductors

Zajednica Jugoslovenske Elektroprivrede (JUGEL) has announced international bidding to supply ACRD conductors for its 380-KV power transmission project, being financed by the International Bank for Reconstruction. Estimated quantity is 15,000 tons. Tenders will be accepted until April 16.

Suppliers interested in furnishing above materials may obtain tender documents in payment of US $150 per set from Zajednica Jugoslovenske Elektroprivrede Coordinating Committee, Balkanska 13-15, 11000 Belgrade, Yugoslavia. Non-refundable payment should be made to account No. 60811-620-58-3096-10-2-1378, Yugoslav Foreign Trade Bank, Belgrade, Attention "Power Transmission Project".

Bolivia Invites Investments In Output For Andean Market

Bolivia's National Investment Institute invites international companies to consider possible investment to manufacture products assigned to Bolivia under the Andean Pact's metal-mechanic sector assignments. The products are switchgear power transmission chain, threading tools, radial drills, threading tool machines, power saws, ferrites, absorption sealed refrigeration units, ball bearings and hand tools for the Andean market.

For details, such as timing and rules of bidding, write the Foreign Investment Services Staff, Bureau of International Commerce, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74123. OPIC.

Romanians Seek Equipment For Building Materials Industry

The Romanian foreign trade company, Forexim, has made inquiries to the American Embassy in Bucharest concerning plants and equipment to manufacture the following types of products:

- PVC (poly-vinyl chloride) building materials, including doors, windows, screens, and wall panels (72.22.0013).
- Mineral wool insulation in semi-rigid panels, rigid panels, and self-bearing panels (49.2.34.4012).
- Bituminized glass fiber felting (49.2.34.-40003).
- Woven fiberglass (49.2.34.40010).
- Bituminized aluminum sheets for waterproof insulation (49.2.34.40011).

The Romanians have very specific trade opportunities in mind with respect to these industry areas and have submitted specifications for what they are seeking in each area. These specifications have been forwarded to the Department of Commerce, Bureau of East-West Trade, Trade Development Assistance Division, Washington, D.C., 20230. Interested companies should write Alan Lewis at the above address or phone 202-967-3969.

Companies are encouraged to review the specifications before communicating directly with the Romanian foreign trade organization. When company contact is eventually established with Forexim in relation to these projects, the project of interest should be referred to by the dossier number listed above.

Reply to: Forexim, 111 Cal. Victoriei, Bucharest, Romania, Telex: 011731.

Foreign Trade Opportunities

These trade opportunities are based on reports received from the U.S. Foreign Service by the Trade Opportunities Division, Room 1322, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1967 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

Abbreviations used are: I (importer); D (distributor); M (manufacturer); A (agent); R (retailer). To avoid delays, requests for loan material must specify country, commodity, foreign government agency.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information, including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

Direct Sales

Foreign private firms are interested in agency agreements and/or distributorships for these products. See also "Representations" listings.

Bituminous coal, lignite mining

12100 — NICARAGUA — Industrial coal for boiler burning; can be of high sulphur content. Buyer interested in securing long term contract for constant supply of industrial coal before proceeding with plans for establishment of coal crushing and processing plant. Buyer will initially require coal to produce BTU equivalency of 30,000 gallons of bunker C fuel per day. Coal to produce an additional BTU equivalency of 1.5 million barrels of bunker C fuel per year will be required after approximately fifteen months. Contract to last 5 to 10 years. Buyer wants prices c.i.f. Puerto Somoza, from eastern and western U.S. ports; type and length of contract offered, etc; other information. Buyer's purchase decision will most likely be based on guarantee of constant supply. Buyer owns and operates a truck fleet for transport of bunker C fuel to industries throughout Nicaragua. Reply to—Mr. Enrique Chamorro C., Mgr., Oleoductos Nicaraguenses S.A., Apartado Postal 4903, Managua. Cable Onsa; Tel 61071.

Construction

●16100—MALAYSIA—The Government of Malaysia will invite bids in June from prequalified contractors for construction of a major highway and bridge works project on Federal Highway Route II, West Malaysia, and on the existing Kuala Lumpur/Karak Highway, Phase II. Works comprise construction of about 24 miles of high standard 2-lane highway and 6 miles of improvements to existing road. Prequalification is open to contractors incorporated in member countries of the Asian Development Bank. Contractors interested in receiving prequalification documents must forward application to the Director General, Public Works Dept., Jalan Maxwell, Kuala Lumpur, Malaysia. Completed prequalification questionaires in English must reach the Director General by April 22. Copies of a telegram from the American Embassy in Kuala Lumpur which provides additional information may be obtained from the Construction and Bldg. Materials Program, Room 2118, U.S. Dept. of Commerce, Washington, D.C. 20230 (telephone: 202-967-3602).

Heavy construction, except highway and street construction

●16200 — WEST INDIES — Construction of two deep water berths in the Port of Castries. The project will include two concrete deck wharves 87 ft. wide with ro/ro platform, about 1,000 ft. long, supported on steel-cased piles, complete with fendering and associated utilities; resiting two timber pile dolphins (depth of water, 36 to 38 ft.) below Port Datum; 1,200 lin. ft. of security fencing; transit shed of 34,000 sq. ft., and wharf operation offices, 1,000 sq. ft. Total cost estimated at US $2,560,000. Tender number is 201. Firms that have satisfactorily performed comparable work should submit prequalification data to Code & Partners, 20 Station Road, South Norwood, London, S.E. 15; or, Blyth and Blyth (W.I.), P.O. Box 248, George Gordon Building, Castries, St. Lucia, West Indies, with a copy each to the Secretary of Finance, Government Buildings, Castries, St. Lucia, and Caribbean Development Bank, Treasury Building, Bridgetown, Barbados, West Indies. Prequalification deadline is April 24. Payment by the Caribbean Development Bank or its agent will be made only upon approval by the Bank or its agent for application presented by the Government of St. Lucia in accordance with terms and conditions of a loan agreement. Tenders for construction will be received only from bidders who have prequalified.

Wood products

●24910 — KOREA — Tenders are invited for 4,880 poles ranging in length from 35-55 feet. Poles are to be given preservative treatment by a pressure process. Invitation No. ADB/L-74016-PII available at the Department of Commerce (202-967-2606). Bids to be opened at 2 p.m. May 10, by the Office of Supply, Government of the Republic of Korea, Seoul, Korea.

Pulp mills, products

26100 — GERMANY — Export trade opportunity exists in East Germany for bleached wood pulp and wood-free printing and writing papers. Interested suppliers to contact Guenther Forgber DDR-104 Berlin Schlegelstrasse 15 TELEX: 011 2889, 011 2989 for additional details.

Drugs

●28300 — BANGLADESH — Mr. Mushtaque Ahmed, Deputy Chief Chemical Engineer, Planning Division, Bangladesh Fertilizer, Chemical and Pharmaceutical Corporation, Shilpa Bhaban, Motijheel C. A., Dacca 2, is interested in establishing contacts with U.S. consulting engineering firms in entire range of birth control devices and contraceptive drug production in order that his firm may undertake a feasibility study designed to look into the technical-economic viability of such an industry in Bangladesh. Interested firms are requested to write to him at address noted.

●28300 — TUNISIA — CIF Tunis quotations requested on 3 metric tons of crystalized oxytetracycline base and 5 million rolls of nonsterile, hydrofile bandage gauze, single ply, standard mesh, five meters long and seven centimeters wide. Please show delivery period and any other conditions. Interested firms should send their quotations to Pharmacie Centrale de Tunisie, Avenue Charles Nicole, El Menzah, Tunis, with copy to Materials Division—Room 2130, OBRA, U. S. Department of Commerce, Washington, D. C., 20230.

Gum, wood chemicals

●28600 — INDIA — ABS molding powder, 821 m.t.; beta napthol, 225 tons; CA butyrate, 498 tons; CA flakes, 510 tons; CA sheets, 50 tons; CN sheets, 145 tons; di-methylamine, 686 tons; high density polyethylene, 11,740 tons; low density polyethylene, 11,816 tons; MMA monomer, 904 tons; melamine pure, 900 tons; methanol, 8,000 tons; mono-methlamine, 290 tons; nylon moulding powder, 720 tons; PVC resins, 4,575; para-xylene, 3,000 tons; phenol, 3,000 tons; phthalic anhydride, 1,802 tons; polypropylene, 4,100 tons; sodium napthionate, 97 tons; sodium nitrate, 3,432 tons; sodium nitrite, 5,630 tons; styrene monomer, no specific amount indicated; trimethylamine, 38 tons; vinyl acetate monomer, 5,030 tons; aluminum flouride, 2,950 tons; ammonium nitrate, 500 tons; aniline oil, 3,865 tons; calcium carbide, 3,860 tons; calcium borate (crude), 5,000 tons; caustic soda, 8,000 tons; citronella oil, 40 tons; cresylic acid, 2,345 tons; di-nitro-chloro-benzene, 2,531 tons; dodecyl benzene, 25,100 tons; endrine, 433 tons; formic acid, 732 tons; graphite, 1,889 tons; gum arabic, 5,550 tons; iso amyl alcohol, 30 tons; lithopone, 3,320 tons; methyl-ethyl-ketone, 527 tons; N.C. cotton, 233 tons; pentaerythritol, 940 tons; peppermint oil, 30 tons; potassium cholride, 10,000 tons; soda ash, 13,500 tons; sodium borate (crude), 14,000 tons; sodium cyanide, 1,506 tons; titanium dioxide-rutile grade, 8,904 tons; titanium dioxide-anatase grade, 1,470. No trade document number or bid deadline date is indicated. The State Trading Corp., a Government of India Marketing Organization, New Delhi, is interested in securing bids on the above items for use during 1974. Bids should include information as follows: Price on c.i.f. basis, terms if any and approximate delivery dates, and they should be forwarded to Embassy of the

United States of America, Attn: Commerce Section, Shanti Path, Chanakyapuri 21, New Delhi, India.

Steel mill products

●33100—**INDIA**—15 kgs superalloy magnetic alloy iron (79 percent nickel, 5 percent molybdenum, balance FE). Tender No. P/514/49/011/12.73/PL; bid deadline April 24. Directorate General, Supplies and Disposals, Parliament Street, New Delhi, India. Tender documents available from India Supply Mission, 2536 Mass. Ave., N.W., Washington, D.C. 20008.

Flat glass

●33100 — **THAILAND** — 27,062 m.t., 80 lb. flat bottom steel rails and accessories. No Tender number; bid deadline May 14. State Railway of Thailand, Procurement Division, Bangkok. Tender documents available from Iron and Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, ★(202-967-2438).

Secondary smelting, refining of nonferrous metals

3341311 — **TURKEY** — 99.97 percent pure lead in ingot form to be oxidized & converted into stabilizer. Annual requirements 150-200 tons. Interested suppliers should submit prices to buyer based on fob shipping port & C.I.F. Istanbul prices. Reply to—Ali Kaykaoglu, Farstab Stabilizator Sanayi A.S., Ciragan Caddesi No. 20, Kat 5, Besiktas, Istanbul, Tel 460648 and 482488.

Rolling, drawing, extruding of nonferrous metals

●33500 — **CYPRUS** — Two parallel 132 kv. underground oil-filled cable circuits each five km. in length with associated pilot cabling and jointing accessories and 500 m., 11 kv. single core MIND substation cable connections. Bid deadline April 2. Electricity Authority of Cyprus, P.O. Box 4506, Nicosia. Tender documents available at above address.

Primary metal industries

3399198 — **MEXICO** — Metallic non-powder of kind used for mfr. of sinterized electric motor pole shoes. Firm has been in automotive electric parts mfg. business for 24 years. Reply to—Lic. Marcelo J. Hinojosa G., Asst. Gen. Dir., Mar-Hino, S.A., F. U. Gomez Sur 203, P.O. Box 1689, Monterrey, N.L., Tel. 42-96-58.

Cutlery, hand tools, general hardware

3421161 — **SWEDEN** — Nail clippers & tweezers. 100,000 pieces ea. required. Operates largest chain dept. stores in Sweden. WTDR 5/73. Reply to—Mr. Ulf Bjork, Purchasing Mgr., Kooperative Forbundet (KF), Department 442-019, S-104 65 Stockholm.

Metal stampings

3466215 — **HONG KONG** — Metal crowns for soft drink bottles. 600,000 to 700,000 crowns with cork lining and 150,000 to 200,000 crowns with plastic lining/yr. Firm is medium sized firm mfg. broad range of food lines. Are local bottlers for Pepsi-Cola & also bottle soy bean based, high protein, soft drinks. Reply to or cable—K. S. Lo, Mng Dir., Hong Kong Soya Bean Products Co. Ltd., 52-54 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong. Cable: Vitasoy.

Metalworking machinery

3546132 — **AUSTRALIA** — Portable hand held grinders, 5 to 6 HP with flexible shaft & appropriate grinding wheels. Mt. Newman, one of Australia's largest mining companies, exports some 30 million tons iron ore annually to Japan. Reply to: — Mr. P. B. Jenkins, Engineering Asst., Mt. Newman Mining Co., Pty Ltd., P.O. Box 7122 Cloisters Square, Perth, Western Australia 6000 Telex AA92261; cable Newmining Perth.

Communications equipment

36600 — **ALGERIA** — The Le Directeur des Equipements et Telecommunications, Ministere des Postes et Telecommunications, Bureau de Marches, Bureau 803,4, Blvd. Salah Bouakouir, Algiers, Algeria, has issued tender No. 10 Emetteurs, Bli/Blu, 10 Recepterus Bli/Blu, 10 Baies de Liaison for 10 automatic transmitters and 10 telegraphy receivers, and 10 switching centers for 2-wire telephone circuit with 2-wire radio-electronic circuit. Bid deadline is April 22. Correspondence in French required. Copies of tender announcement and specifications available from above address or on short-term loan basis to firms located in the U.S. from the Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, telephone 202-967-2939, when tenders are received at Commerce Department.

36600 — **INDIA** — The Chief Signal and Telecommunication Engineer (Construction), Northern Railway, Headquarters Office, Baroda House, New Delhi, India, has issued tender No. 256-SIG/1217 (Const) Vol. II for installation of axle counters, track devices, and specialized test equipment for automatic signalling between Ambala Cantt and Rajpura, Northern Railway, India. Bid deadline is April 15. Copies of tender announcement and specifications available from above address for rupees 20 ($2.66 approximately) per set sending cross bank draft before April 11, or on a short-term loan basis to firms located in the U.S. from the Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, telephone 202-967-2939, when received from India.

36600 — **IRELAND** — The Department of Posts and Telegraphs, Contracts Section, Marlboroughs Street, Dublin 1, Ireland, has issued tender No. C/610/4/24-IML/74 for supply and installation of circuit carrier-on-cable systems on 8 routes. Bid deadline is April 24. Copies of tender announcement and specifications available from above address or on a short-term loan basis to firms located in the U.S. from the Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, telephone 202-967-2939, when tenders are received from Ireland.

38200 — **INDIA** — The Director of Stores and Purchase, Oil and Natural Gas Commission, Tel Bhawah, Dehra Dun, U.P., India, has issued tender No. 2958 for cathodic protection instruments such as corrosion rate meter, underground fault finder, "pulsed type" holiday detector, pipe flange tester, automatic current interrupter, multi-combination corrosion test set. Bid deadline is April 24. Copies of tender announcement and specifications available on a short-term loan basis to firms located in the U.S. from the Science and Electronics Division, BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, telephone 202-967-2939, when copies are received from India.

Wholesalers

50930 — **TAIWAN** — Waste paper 10,000 tons/mo. Price ranges: corrugated box $85-90, tissue paper $55-60, newspaper $48-50, mixed paper $12-15. Reply to Mr. Cesar S. Wang, Sub-Mgr., Morrison Development Corp., Import Dept., 25 Jen Ai Rd., Sec. 4 (12th Floor), Taipei 106. Cable MORRISONCO; tel 720311; telex 21604 Morrison.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Prefabricated textile products

2396151 — **BOLIVIA** — Hatter's rabbit hair (raw material for making hats). Has customer who uses 500 kilograms hair per mo. Reply to—Franklin R. Taendler, "Francar" Casilla 3960, La Paz. Cable: "Francar," La Paz. Telex: ITT 3560084. WTDR 4/73.

Building paper, building board mills

2661222 — **ICELAND** — Roofing felts. Gauge 450 grams/sq. yd., in rolls one meter wide, roll radius 40-50 cm. Core radius 9 cm. Quote f.o.b. Norfolk. Sole mfg. plant in Iceland of asphalt roofing paper, also mfgs. building sealants. Estab. 1973. First year sales about eight million Icelandic kroner. Employs four. Contact buyer—Orn Jonsson, Mgr., Silfurtun Ltd., P.O. Box 21, Godatun 2, Gardahreppi.

Industrial chemicals

28163 — 2821 — **UNITED KINGDOM** — Resins & polymers used by plastic processing paint producing & printing ink industries such as: fire retardant additives, antistatic & surface active agents, stabilized lubricants, thixotropic & antisettling agents, specialized plasticizers & solvents, fillers & extenders, driers & metallic soaps, antioxidants, inhibitors, U/V absorbers, defoamers & glass-fiber reinforcement. Pigments & colorants. Exclusive agency. Reply to—J. G. Leadbetter, Freeman Chemicals Ltd., P.O. Box 8, Ellesmere Port, Wirral, Cheshire L65 4AH. Cable Freeman Chemicals Ltd.; Tel: 051-355-6171/7; Telex: 62639.

Primary smelting, refining of nonferrous metals

33397 — **UNITED KINGDOM** — High purity minor metals for electronics industry, including antimony, bismuth, indium, germanium, silicon. Exclusive agency & distributorship. Reply to—Mr. C. J. Westicott, Mgr. Production Materials Div., Guest International Ltd., 320, Purley Way, Croydon, Surrey. Telephone: 01-586-0625; telex: 946880.

Special industry machinery

3554059 — **NETHERLANDS** — Paper & paperboard converting machinery, including drum, can & tube making machines. Excl. distributorship for Benelux. Reply to Mr. L. M. Brillemans, Mgr., Van Randwijks Grafische Machinehandel N.V., 74 Dubbeldamseweg, Dordrecht. Cable: Rador-dordrecht. Benelux Twx: 22134. Telephone: 078-38344.

3555567 — **NETHERLANDS** — Collating and/or gathering machines (sold separately). Excl. distributorship for Benelux. Reply to Mr. P. M. Draeck, Machinehandel P. Van Dijk B.V., 73 Hogeweijselaan, P.O. Box 56, Weesp. Cable Dijkam-Weesp. Twx: 11048. Tel: 02940-14951.

Office, computing, accounting machines

3574127-3574135 — **DAHOMEY** — Adding machines, calculators. Buyer is major local retail outlet for electric equip. & appliances. Buyer now selling Japanese calculators, but most likely American brands could compete successfully, especially for pocket models. Would not be capable of performing service on machines purchased. Correspondence in French necessary. Contact buyers at these addresses: Directeur Gen. Ottamo Trading

Co., B.P. 1645, Cotonou, Cable B.P. 1645. Also, Directeur G n. Deepa, B.P. 1823, Cotonou, Cable B.P. 1823. Also, Directeur Gen. C.F.A. O., B.P. 908, Cotonou, Cable B.P. 908.

Electrical industrial apparatus

3621100 — SWEDEN — Two specific kinds of fractional HP electric motors: shade pole, & geared. Requests telex or telegraphic responses. Reply to—Mr. Anders Stalskog, Specialmaskiner AB, Box 17001, S-104 62 Stockholm 17. Cable: Specma; telex: 17849; Telephone: 08/24 68 50.

Electrical machinery, equipment, supplies

3699251 — AUSTRALIA — Domestic door chimes electrically operated either by transformer or battery. Exclusive distributorship. Reply to—Mr. M. Holland, Marketing Asst., Prestige Group (Australia) Pty Ltd., 100 Briens Road, Northmead, NSW 2152. Cable Presgroup; Tel 630.5188.

Instruments for measurement control and analysis

3821498 — BELGIUM — Automatic speed control apparatus (to be used on passenger cars to determine cruising speed). Exclusive agency. Reply to—Jean E. Wintgent, Mtng. Dir., Bureau Technique Wintgens, 4700 Eupen. Telex 1558; telephone: (087)539.21.

Manufacturing industries

3999998 — JAPAN — Decorative self-adhesive non-slip surfaces for use in bath tubs. Price range not known by buyer. Catalogs and/or samples, price quotations desired. Reply to—Mr. S. Kubo, Dir. Zao Products Co. Ltd., Takao Bldg., 3rd Floor, 6, 2-Chome Imaizumi, Chuo-Ku, Fukuoka, Japan 810.

Antique, secondhand stores

59310 — MOROCCO — Wearing apparel, used, first choice, including raincoats, jackets, slacks, suits, shirts, sweaters for men, women, youth. Exclusive agency. Reply to: Mme. Amina El Aydi, Societe d'Industrie et de Commerce Hassania, 40 Rue d'Alger, Casablanca. Tel: 27-59-95.

Special product groups

9950014/9950018/9950020/9950024/9950030/9950032/9950042 — SWITZERLAND — Do-it-yourself items, novelties, gadgets, transfers, giftwares, small housewares & decoration items, hobby ware, non-foods, small automotive accessories for sale in department, variety and stationery stores, automotive hardware trade, supermarkets. Cadox is reputable, successful manufacturer/distributor of decalcomanias, novelties, gadgets sold in department stores, automotive trade. Est. 1958. Employs 20. Sales territory: W. Europe. Cadox seeks close collaboration with U.S. counterparts for exchange of items. Reply to Claude Girardet, Dir., Cadox, 6-8 Ave. de Chailly, 1012 Lausanne. Cable: Cadox Lausanne Tel: 021/32 26 99.

Firm Seeks Manufacturing, Service Operations In Europe

A long established chemicals and plastics producer with current annual sales of $80 million, wishes to contact U.S. firms that may be interested in selling their European divisions or affiliates.

The European firm is interested in discussing the possible acquisition of all types of manufacturing and servicing operations. Contact: Joel D. Peterson, Corporate Diversification, Ltd., 405 Lexington Av., New York, N. Y. 10017; phone, 682-6580. Cable address: CORPODIV, New York. P-74122.

Future Construction Abroad

KOREA — The Republic of Korea Government and the World Bank are in the final stages of negotiating a $47 million loan for **a three-part highway construction program.** The project consists of: Construction of Wonju-Kangnung Highway (97 Km) and Mukho-Kangnung Highway (29 Km); paving of 658 Km of second class roads, and purchase of highway maintenance equipment. The major opportunity for U.S. exporters in this project is the $8.25 million purchase of maintenance equipment. A French firm, BECOM, is drawing up the specifications and the Office of Supply, Republic of Korea (OSROK) is expected to issue invitations to bids by July 1974. Interested suppliers should contact Mr. Choi, Ho Sock, Director, Bureau of Foreign Procurement, OSROK, Seoul, 110, Korea or Mr. Park, Joong Ho, OSROK Procurement Officer, Korean Consulate General, 720 Fifth Ave., New York, N.Y. 10019, Tel: 212/586-5829 to request information on submission of bids.

CANADA — The Montreal subway extension project is still an active project and work is proceeding on schedule. The new line which will service the 1976 Summer Olympics will be completed by early 1976. The entire extension should be completed by 1981. The project is supervised by the Metropolitan Transit Bureau (MTB) of the Montreal Urban Community (MUC). The MTB prepares the engineering specifications, but architects and consulting engineers have been designated for each of the 35 new stations included in the plans. The project is financed by the MUC, with assistance from the Quebec provincial government. Some 23 contracts have been let to date, practically all for tunneling and construction. The MTB is now calling tenders for major equipment contracts which should interest U.S. manufacturers. MTB prepares tender documents in French only and tenders must be submitted in French, although correspondence in English is acceptable. Tender return periods average three to four weeks. The tender documents are made available on payment of a fee, usually C$40 to C$45, and may be consulted without charge at MTB offices. Payment must be in Canadian currency, by certified check drawn on a Canadian bank and payable to the Montreal Urban Community. The MUC does not accept bid bonds. The Administrator of the MTB is Mr. Marcel Pinet, an engineer, who has indicated that he would welcome inquiries from prospective U.S. bidders. U.S. firms interested in specific contracts and wishing advice about the preparation of tenders in French should communicate with Mr. Pinet at MTB, 1701 du Havre St., Montreal P.Q., Canada, postal zone H2L 4J7, Tel: 514-872-6871.

FRANCE — AMP France, a subsidiary of AMP Inc. of Harrisburg, Pa., will significantly expand its manufacturing facilities in the industrial zone of Incarville. The total project includes about 18,000 sq. meters of **plant and warehouse** for AMP's line of electronic components and electrical accessories. Foundation work is to begin later this year. Although U.S. construction companies not already established in France may find participation difficult, U.S. suppliers of electronic production equipment may be interested. U.S. businessmen may obtain further information from: G.P.I. Basse-Seine, Groupement Professionel d'Engineering de la Basse-Seine, 548 Chemin de la Breteque, 76230 Bois-Guillaume, Tel: 70-95-74 or Mr. Frederic A. Celler, President General Manager, AMP France, 29 Chaussee Jules Cesar, 95300 Pontoise, Tel: 464-9220.

CANADA — The Montreal Urban Community (MUC) **plans construction of a sewage treatment plant and system of collector sewers.** (Earlier plans for two plants have been modified). Located in two million sq. ft. of land in the northeast section of the island of Montreal, it will provide primary treatment only but will permit the addition of secondary treatment facilities at a later date. The estimated cost has increased from C$300 to $C350 million, with some C$200 million for the collector sewers and C$150 million for the treatment plant and equipment. It is expected that first tenders for construction of the collector sewers will be called during the second half of 1974 and those for the plant and equipment in late 1975. Equipment for the treatment plant will offer the best trade opportunities for U.S. firms. Tenders for this equipment will not be called for some time but U.S. suppliers can write to the coordinator, Mr. Jean Marcotte, Director, Water Purification Office, Montreal Urban Community, 2620 St. Joseph Blvd. East, Montreal, P.Q. H1V 2A4.

FINLAND — The Tornio **stainless steel plant** of Outokumpu Oy is scheduled to start output in 1976 with initial annual production of 30,000 tons. Later it is intended to raise the production capacity to 50,000 tone annually. The foundation work of the necessary factory buildings will be started next summer. Total floor space will amount to about 9 hectares. The largest plant building is the cold-rolling mill, about 600 meters by 100 meters. In addition to plant buildings, a substantial number of residential buildings will be erected, about 450 in 1974-76. The total area of the industrial plant amounts to about 220 hectares. An agreement was signed with Friedrich Krupp Huttenwerke AG, a German company in stainless steel production, for assistance in planning and construction, and schooling and training of the operation personnel. Invitations to tender for the first main machines have been issued. Mr. Olavi Siltari of Outokumpu Oy sees the greatest opportunities for U.S. suppliers in control equipment and devices. Companies with expertise in the field of stainless steel production should make known their products to: Mr. Olavi Siltari, Project Engineer in Charge, Tornio Stainless Steel Plant, Outokumpu Oy, PL 27, SF-02101 Tapiola, Finland.

NETHERLANDS — Estel N.V., the Hoesch-Hoogovens steelmaking combination, announced plans to spend over $150 million to **increase raw steel capacity** to 15 million metric tons from 12.8 million tons in order to supply its raw steel needs until the beginning of the 1980's. It will spend $75 million to increase capacity to the Hoesch facility in Dortmund, Germany to about 7 million tons from 6.6, and $75 million at the Hoogovens plant in IJmuiden, Netherlands to raise capacity to 8 million tons from 6.1 million. A further $8 million will go into steel processing and $5 million for diversification. Hoogovens' purchasing agent in New York City is probably the best point of contact for interested U.S. suppliers: OREMCO Inc., 261 Madison Ave., New York, N.Y. 10016, tel: 212/867-4400.

NEPAL — The Government of Nepal invites firms to prequalify for bidding on two con-

tracts for **either two equivalent size road projects along with four major bridges and a number of minor bridges; or two contracts for roadway construction along with minor bridges and one contract for four major bridges.** Qualified contractors may bid for one or all. This project is Asian Development Bank-financed at a cost of U.S. $11 million. Contractors should send letters of interest with their brochure to Project Director, Hetauda-Narayangarh Highway Project, P.O. Box 675, Kathmandu, Nepal. On receipt of company brochure, a detailed questionnaire will be sent for determining qualification based on: reputation and financial standing; experience in highway and bridge construction. with preference to experience in similar environments; strength of personnel to be assigned and available equipment; and ability to carry out project. Invitation to tender scheduled for October 1974 and construction to start October 1975. Prequalification deadline is April 15. Specifications and other details available from the Project Director.

PORTUGAL — The New Lisbon Airport Planning Cabinet (GNAL) invites firms or groups of firms to prequalify in acting as **consultant for construction of the New Lisbon Airport.** Prequalification documents will be accepted by GNAL until May 1 from Portuguese firms or from Portuguese firms associated with foreign firms or from Portuguese firms intending to associate with specified foreign firms. Conditions of prequalifications and other details available from GNAL, Av. da Brasilia, Lisbon 3. Any engineering firms involved with winner of general contract will be excluded from contention for consultant contract. U.S. firms which wish to make contact with appropriate Portuguese consulting firms are invited to contact the American Embassy, Avenida Duque de Loule No. 39, APO New York 09678, Ref: Telegram Lisbon 804.

MOZAMBIQUE — The Government of Mozambique, Municipal Water & Power Supply Dept., Lourenco Marques, will issue **public tenders for the following contract works:** water pumping and treatment station, U.S. $4.0 million; laying of 1.400 millimeter wide conduits, U.S. $10.0 million; Maxaquene water distribution station, U.S. $2.4 million; Mahotas water distribution station, U.S. $2.0 million. Bidding firms will be required to construct all buildings, water reservoirs and towers, as well as supply and install water main pipes, pumps and equipment for water treatment. When announced, tenders will be opened for two to six months. In addition to the main contract works, the Water & Power Supply Dept. will announce a new tender for the proposed first phase work on the earth dam of the Lebombo Mountains, to cost some U.S. $10.0 million, designed chiefly to assure regular water supply to Lourenco Marques.

YUGOSLAVIA — Zajednica Jugoslovenske Elektroprivrede (JUGEL) issues international bidding on Tender Notice No. 7, **supply of ACRD conductors for 380-KV power transmission/project,** being financed by International Bank for Reconstruction and Development (Loan No. 836-YU). Estimated quantity 15,000 tons. Manufacturers, suppliers interested in furnishing above material may obtain tender documents for U.S. $150 per set from Zajednica Jugoslovenske Elektroprivrede, Coordinating Committee, Balkanska 13-15. 11000 Belgrade, Yugoslavia. Payment should be made to Account No. 60811-620-58-3096-10-2-1378. Yugoslav Foreign Trade Bank, Belgrade, Attn: "Power Transmission Project". Payment will not be refunded. Bid deadline April 16.

KOREA — The **Inchon Port Development Project and Pusan Development Project** still may be in need of U.S. goods and services. Pusan Port: This $80 million IBRD-financed project includes modernization of the Mukho port. Lyons Associates, Inc., signed a $6.6 million contract for detailed design, supervision and technical assistance. Interested U.S. firms should contact Mr. Otis Fowler, Project Manager, Lyons Associates Inc., Daewoo Bldg., 8th Fl., 3-106, 1 Ka, Do-dong, Chung-ku, Seoul, 100 and Mr. Kim, Chong Hak, Director, Pusan Port Authority, 46, 3-ka, Daechang-dong, Dong-ku, Pusan. Inchon Port: The Ministry of Transportation and the Economic Planning Board have tentatively selected Trans Asia Engineering as consultant; no contract has yet been signed. This additional $16 million ADB loan will be used primarily for civil works. U.S. firms wishing additional information should contact Mr. Kim, Tong Whee, Director, Bureau of Harbor Facilities, Ministry of Construction, Seoul, 110, or Trans Asia Engineers, CPO Box 634, Seoul, 100.

INDIA — The Kohinoor Mills Co. Ltd. envisages establishment of a **cotton and cotton-blended synthetic fiber composite textile mill** with a daily capacity of 18,000 kilograms yarn (10-36 counts) and 100,000 meters cloth such as canvas, toweling, sheeting, tapestry and poplin to be located in the Kandla Free Trade Zone on the western coast of India. Kohinoor is interested in importing a reconditioned textile mill complete with spinning, weaving and wet-processing machinery and such allied equipment as batching machines, boiler house, power generator, humidification/ventilation and water softening. Kohinoor is applying to the Government of India for permission. Interested firms should contact Mr. M. M. Shah, General Manager, The Kohinoor Mills Co. Ltd., Naigaum Cross Rd., Dadar, Bombay 400 014.

JAMAICA — Ground has been broken for a U.S. $1.2 million **four-story building** to house the Canadian Imperial Bank of Commerce and its companion Trust Company in the Cayman Islands. Completion is expected by January 1975. The elevations facing the streets will have large areas of bronze anodized aluminum sun grills to cut down on glare inside. Two elevators at the western end will take the roofline to the maximum 55 ft. allowed by the planning laws. Parking space will be provided for 35 cars at the rear where the cistern, sewage treatment plant, vaults and a small basement for such service activities like paper shredding will be located. Each floor will have separate air conditioning system. U.S. suppliers have the opportunity to sell to the contractors. Developers: Canadian Imperial Bank of Commerce, P.O. Box 695, George Town, Grand Cayman. Architects: Donald E. Skinner, Port Credit, Ontario, Canada. Contractors: McAlpine Ltd., Thompson Bldg., P.O. Box 711, George Town, Grand Cayman. Tel: 92135.

NETHERLANDS — The Provincial Water Authority of the Province of North Holland has announced that in the future water will be obtained from the IJssel Lake (formerly the Zuider Zee). Therefore, planning has begun for construction of a **pumping station and a 70-kilometer heavy 1200-millimeter pipeline** from the pumping station to a distribution center. In the IJssel Lake a reservoir will be constructed. Total costs of the project, which will be directed by the Provincial Water Authority, are estimated at about $200 million. Construction is divided into three parts: the pumping station, the pipeline and the reservoir. These projects have not been assigned to contractors. Letters for information, or offers of U.S. suppliers should be sent to Mr. C. Sprey, Director, Provincial Waterleiding Bedrijf van Noord—Holland, Haarlem, The Netherlands. They can inform suppliers of pipe and pumps who the contractors will be.

VENEZUELA — The government's petrochemical organization, Instituto Venezolano de Petroquimica (IVP), Edificio Aco, Ave. Principal de las Mercedes, Caracas, and private investors plan to construct a **complex for the manufacture of synthetic fibres.** Approval has been granted by the Institute's Executive Board for installation of a 35,000 MT/year acrylonitrite plant and a poliacrylontrite and acrylic fiber plant with an annual capacity of 10,000 MT. The project is expected to attract foreign companies contributing technology as well as interested Venezuelan parties. Total investment is estimated at $35,050,000. The project is still in the "study" phase and location of plants has not yet been decided.

BRAZIL — Brazil has initiated a second revolutionary **expansion of its telecommunications network.** Whereas the earlier expansion of 1968-72 dealt basically with long-line communications, the present program includes urban, intra-state and inter-state facilities and accompanies an equally revolutionary change in the governmental organs and corporate enterprises managing the nation's telecommunications structure. These changes will greatly enhance the capacity and quality of Brazil's communications by 1980, as well as set the basis for continued growth. This modernization program, although supplied largely by domestic industry, should offer U.S. manufacturers significant export and investment opportunities. A report from the American Consulate General Rio de Janeiro giving further information on Brazil's telecommunications developments is available from the U.S. Department of Commerce, Trade Opportunities Program, Rm 1322, Washington, D.C. 20230.

BOTSWANA — An estimated **$7.5** million will be spent by Botswana's Department of Posts and Telecommunications during the 1973-78 National Plan Period for **expansion and improvement of the telecommunications system.** Approx. $3.3 million will be financed by a loan from the African Development Bank. Trunk routes planned for the next five years are land lines from Ghanzi to Maun and Maun to Nata. Very high frequency radio trunk routes from Francistown will supplement the land lines serving Selibe-Pikwe and Orapa. In the south it is planned to upgrade the Zeerust-Lobatse trunk route in cooperation with South African telephone authorities. That project will, in conjunction with a proposed new international telephone exchange in Gaborone, give high quality subscriber trunk-dialing access to the South African system and also improve access to other international systems. Other major projects planned for the next few years are: completion of the program of converting major village exchanges to automatic operation at Molepolole, Mochudi, Palapye, Serowe, Kanye and Mahalapye; extension of subscriber trunk-dialing facilities to all automatic exchanges; installation of a new 3,000-line exchange in Gaborone, which will free existing equipment for deployment elsewhere; and expansion of telex facilities by installation of a new telex exchange in Gaborone and transfer of the present exchange to Francistown. Good opportunities exist for certain kinds of U.S. equipment, especially for purchases financed under the ADB loan. Interested U.S. consulting engineers and equipment manufacturers should correspond with the Department of Posts and Communications, Private Bag 7, Gaborone, Attn: Mr. B. A. Muddle, Assistance Director of Telecommunications.

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ALBUQUERQUE, N.M., 87101, Room 316, U.S. Courthouse (505) 766-2386.

ANCHORAGE, 99501, 632 Sixth Ave., Hill Bldg., Suite 412 (907) 265-4597.

* **ATLANTA**, 30309, Suite 523, 1401 Peachtree St., NE. (404) 526-6000.

BALTIMORE, 21202, 415 U.S. Customhouse, Gay and Lombard Sts. (301) 962-3560.

BIRMINGHAM, ALA., 35205, Suite 200-201, 908 S. 20th St. (205) 325-3327.

BOSTON, 02116, 10th Floor, 441 Stuart St. (617) 223-2312.

BUFFALO, N.Y., 14202, Room 910, Federal Bldg., 111 W. Huron St. (716) 842-3208.

CHARLESTON, S.C., 29403, Federal Bldg., Suite 631, 334 Meeting St. (803) 577-4171, Ext. 361.

CHARLESTON, W.VA., 25301, 3000 New Federal Office Bldg., 500 Quarrier St. (304) 343-6181, Ext. 375.

CHEYENNE, WYO., 82001, 6022 O'Mahoney Federal Center, 2120 Capitol Ave. (307) 778-2151.

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CLEVELAND, 44114, Room 600, 666 Euclid Ave. (216) 522-4750.

* **DALLAS**, 75202, Room 3E7, 1100 Commerce St. (214) 749-1514.

DENVER, 80202, Room 161, New Custom House, 19th and Stout Sts. (303) 837-3246.

DES MOINES, IOWA, 50309, 609 Federal Bldg., 210 Walnut St. (515) 284-4222.

DETROIT, 48226, 445 Federal Bldg. (313) 226-3650.

GREENSBORO, N.C., 27402, 203 Federal Bldg., W. Market St., P.O. Box 1950. (919) 275-9111, Ext. 345.

HARTFORD, CONN., 06103, Room 610-B, Federal Office Bldg., 450 Main St. (203) 244-3530.

HONOLULU, 96813, 286 Alexander Young Bldg., 1015 Bishop St. (808) 546-8694.

HOUSTON, 77002, 201 Fannin, 1017 Federal Office Bldg. (713) 226-4231.

JACKSONVILLE, 32207, Suite 129, 4080 Woodcock Drive. (904) 791-2796.

KANSAS CITY, MO., 64106, Room 1840, 601 E. 12th St. (816) 374-3142.

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